

IN <sup>C</sup> T O S H

BATTERY  
& OPTICAL  
COMPANY

CHICAGO - ILL.

U · S · A

TWENTY NINTH EDITION

# Illustrated Catalog of Electro-Therapeutical Apparatus

If you would have the best, always insist on seeing the name



on every electro-therapeutical instrument you purchase

McIntosh popular, up-to-date Wall Cabinets

McIntosh-Carpenter Vibrator

MacLagan Wire Rheostat

McIntosh Standard X-Ray Coil

McIntosh Portable Dry Cell Batteries

McIntosh Therapeutic Lamps

McIntosh Improved Milliamperemeter

Cautery Transformers and Converters

McIntosh Combined Galvanic  
and Faradic Fluid Batteries

Batteries and Appliances for Dermatology

The most complete line of  
Electrodes for use in the Science of Electro-Therapy  
to be found in the world

Manufactured by

**McIntosh Battery & Optical Co.**

Chicago, Ill., U. S. A.

# FOREWORD

It was St. Paul who sounded the key-note of progress—"forgetting the things which are behind, let us press forward toward the mark of our high calling." Many a business career has been dwarfed by too much dwelling on the past—lamenting over the "has beens," or satisfaction with the things that were. We live in an age of progress; if we would keep in the eye of the public we must forget the things of the past and press forward. It is true, however, that our best success frequently grows out of our failures and so it is well that we should look back so often as to profit by what has been done, so that ever our pressing forward may be into new fields of useful accomplishment.

One of our oldest customers, in writing to us recently, says: "I have been using your goods for now nearly fifty years." Well, this valued friend is making us a little older than can be borne out by facts. We have, however, completed our twenty-ninth year. We have seen—we may even claim that we have been a part of all the development along the line of Electro-Therapeutic Apparatus. The establishment of our business antedates instruction along the line of Electro-Therapeutics in the Medical Colleges, and it was our very good fortune that throughout the first fifteen years of the business Dr. L. D. McIntosh, eminently well equipped both as to Medicine and Dentistry, was the Therapeutic and Scientific head of our business. Dr. McIntosh, up to the close of his busy and active career, was in close personal touch with all the leading Medical and Surgical Practitioners. He was, moreover, in advance of his professional associates in all that concerned the rapidly developing science of Electro-Therapy. Following the leadership of this active and beloved coadjutor, the Company has steadily developed its business—keeping ever in the van of scientific progress.

In the conception period there was the McIntosh Combined Galvanic and Faradic Battery, justly celebrated and never surpassed in quality and adaptability to the needs of the early day. Then followed the various types and designs of Table and Wall Plates for use with cells. Soon these elaborate designs in hard rubber and nickel-plated



mechanism were replaced by the marble plates with simplified devices to enable the practitioner to utilize the 110 volt direct dynamo current. At this stage of progress the imperative need for Controlling Rheostats and reliable Meters brought out the McIntosh Graphite Rheostat and the McIntosh Milliamperemeter. The development along the line of durable and reliable instruments of control and of accurate measurement has produced the McIntosh MacLagan Wire Rheostat and the McIntosh Shunt Milliamperemeter—two instruments indispensable in the present day advancement and widely copied throughout the world because of their recognized desirability and value. It soon became evident that the current likely to be available to the great majority of practitioners was the 110 volt alternating dynamo current. This called for new adaptations and brought forward the Transformer and the Rectifier with all of their manifold adaptations for the multiform needs of the physician and surgeon in advanced Electro-Therapeutical practice.

Very rapidly the value and adaptability of the various commercial currents have developed—bringing the need for new designs in Vibrators, Apparatus for Illumination and Cautery—and special lamps for direct application of heat or chemical light rays. The X-Ray at first was looked upon only as a Scientific Toy of curiosity and interest. It has become the most valuable diagnostic assistant of the practitioner—and the day has gone by when there need be any careless taking of chances in the treatment of bone fracture or the search for metallic substances within the tissue. Along all of these lines this catalogue shows that the McIntosh Company has kept steadily in the van of progress—and an examination of our various designs will reveal how truly we have originated and improved, while some of our competitors have only copied and endeavored to cheapen the quality of the device. We stand firmly on the line marked out by Dr. McIntosh—"Offer only the highest quality of material and workmanship"—our guarantee has always been absolute. We do not use either cheap workmen or cheap material. Our workmanship and material is of the highest grade and our inspection is careful and thorough. If, notwithstanding our care, a fault develops which is due to our oversight, we make such fault good at any time and regardless of the conditions under which the goods may have been sold.

We enjoy the confidence of the Surgical Trade all over the world and our friends in the profession can place orders for our goods with their home surgical house in the utmost confidence of the same care being exercised by us and enjoy the same guarantee as to quality as if

the purchase were made direct from our factory. We feel justly proud of our new home—a choice location within the business center—a fine building with all modern equipment, a factory operated by electricity—each piece of machinery having its special motor. We extend a warm welcome to our friends of the past years and to the multitude of new seekers after high-grade apparatus whom we desire to number as our friends. Remember that whether you make your selection in our show-rooms or place your orders with your local dealer, or whether your selection is made by letter, you secure the "McIntosh Absolute Guarantee." We want your trade; but more than this, we wish that what we furnish you shall give you the very highest degree of satisfaction and service. See that what you obtain bears the name "McIntosh."



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## OUR POLICY

### Terms

In order to offer our goods to the profession at rock-bottom prices, it becomes necessary to adhere to a strictly cash basis, and, therefore, all prices quoted in this catalog are *NET*—terms *CASH WITH ORDER*.

### C. O. D.

We will send goods C. O. D. upon receipt of one-third of the purchase price.

### How to Remit

Remittances should preferably be made by draft or money order. Amounts under one dollar can be forwarded in postage stamps.

### Guaranty

Purchasers need have no hesitation in sending remittances or placing orders with us; we are able and anxious to perform in full our promises as we have built up our reputation on the strength of twenty-nine years of fair dealing. We guarantee every article of our manufacture—mechanically, electrically, artistically—and we agree to make good any defect in apparatus, where it is the result of imperfect material or improper workmanship.

### All Apparatus Tested

Each and every article of our manufacture is subjected to severe and critical tests as follows: The component parts are tested while under construction; the finished article is tested after being assembled, and a final test is made before shipment. Complete and concise instructions for setting up and operating accompany each piece of apparatus sent out.

### Shipments

Delivery of goods, either freight or express, is invariably made f. o. b. Chicago. The shipping weight of each article is given in catalog, thus enabling the purchaser to ascertain the exact cost laid down in his town by making inquiry of the prevailing rate from his freight or express agent. When ordering goods to be sent by mail, allowance should be made for postage.

### Small Orders for Supplies

Such as battery renewals, should always be accompanied by remittance to cover estimated cost of same when the price is not known, so as to expedite delivery.

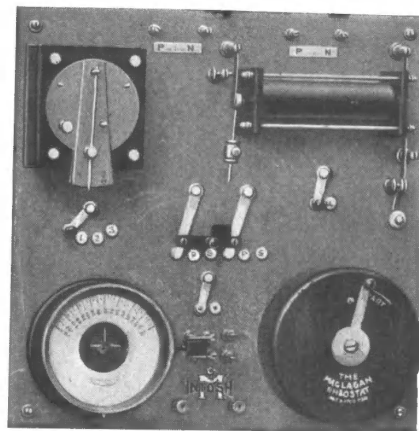
### We Solicit Your Trade

On the basis of courteous and honorable treatment and offer you fair and honest values—dollar for dollar.

**McIntosh  
Battery &  
Optical Co.**

227-229 Washington St.  
CHICAGO, ILL.

### McINTOSH No. 6 PLATE



Price, including conducting cords, universal handles and sponge discs ..... **\$35.00**

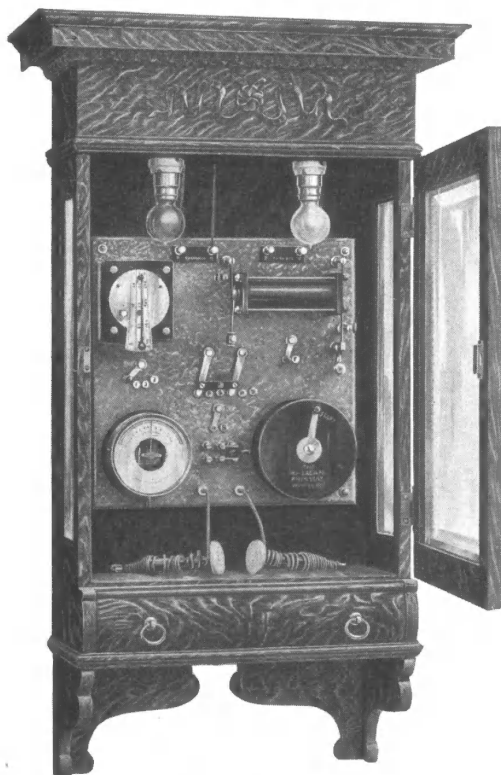
We here illustrate our No. 6 Plate, a complete, up-to-date piece of office apparatus. The handsome, polished marble base, sixteen inches square, contains the MacLagan Wire Rheostat, McIntosh Improved Milliampere-meter with Shunt, Graduated Automatic Rheotome, Large Faradic Coil with Rapid and Slow Vibrators, Pole-changer, Current Selector and other necessary switches and binding posts for administering the galvanic and faradic currents.

It can be operated in connection with either the 110 volt direct current with a lamp in series or may be used in conjunction with a Rectifier on an alternating circuit. A battery of 43 liquid or dry cells answers equally well as a source of energy.

The apparatus may be attached to the wall or placed horizontally on a table and it works equally well in either position.

SHIPPING WEIGHT, 45 LBS.

## McINTOSH No. 6 PLATE IN STYLE "A" WALL CABINET



### PRICES

Arranged for 110 volt direct current or cells .....	\$50.00
Arranged for 220 volt direct current .....	52.50
Arranged for 500 volt direct current .....	55.00
Arranged with Sinusoidal Switch for alternating current .....	52.50

This apparatus, deservedly our most popular outfit, is marked by simplicity of design and the elegance offered only by the richest of materials in combination with plain construction. No frills or gingerbread decorations are offered, but simply the necessary features—all of most substantial construction.

Each modality afforded by this plate is of equal value with the same modality as offered by the more expensive plates—no attempt having been made to slight the therapeutic value to reduce the cost of manufacture.

We maintain that an outfit of equal value cannot reasonably be sold at a less price than this—either the mechanical durability or the external finish being slighted in order to attain a lower figure.

SHIPPING WEIGHT, 140 LBS.

THE McIntOSH No. 6 PLATE consists of a highly polished Tennessee marble plate sixteen inches square, containing the MacLagan Wire Rheostat, affording perfect control of all currents from zero to full potential; the McIntosh Improved Milliamperemeter with Shunt, scales 0-20 and 0-400, giving accurate measurement of the galvanic current; the Graduated Automatic Rheotome, permitting of the interruption of either galvanic or faradic current at a frequency of from 8 to 600 times per minute; a Large Faradic Coil, containing Primary winding of 230 ft. of No. 20 wire and Secondary winding of 1300 ft. of No. 30 wire, and fitted with Slow Vibrator, giving a slowly interrupted current, suitable for muscular treatment as well as a Singing Rheotome or Ribbon Vibrator, affording rapid interruptions, suitable for local anaesthesia; a Pole-changer, Current Selector and other necessary switches for obtaining the various currents, together with binding posts for patient and for supply current.

STYLE "A" WALL CABINET is built of thoroughly seasoned, kiln-dried, quarter sawed oak and is hand rubbed to a brilliant polish in the popular, dark golden finish. The sidelights are of double strength glass while the panel in door is of beveled plate. Two lamps are placed in the cabinet, one being connected in parallel for illumination only, and one wired in series with the plate for purpose of resistance. The cabinet is further embellished by hardware of ornamental design, while a drawer provides for reception of electrodes. It measures 44 in. high, 25 in. wide and 14 in. deep.

The cabinet may be supplied in birch with fine mahogany finish or in quarter sawed oak with the dark, dull weathered oak finish at \$1.50 extra.

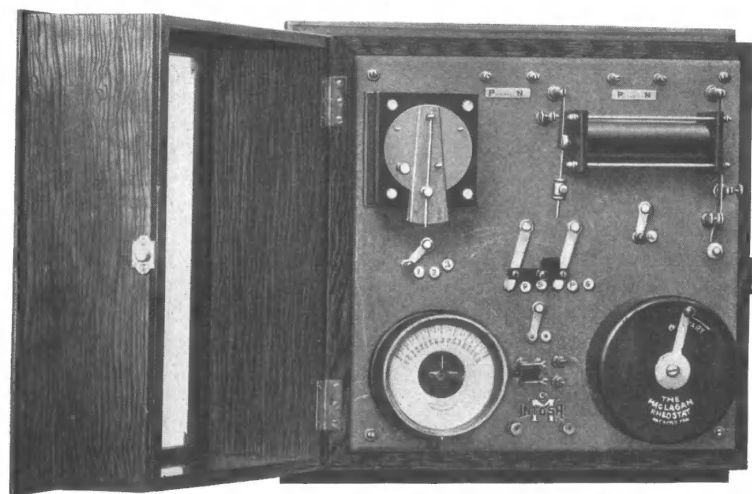
THE MODALITIES AVAILABLE with the No. 6 Plate include galvanic current; interrupted galvanic current; current for electrolysis; current for cataphoresis; primary faradic current; secondary faradic current; slowly interrupted faradic current; rapidly interrupted faradic current; slowly pulsated, rapidly vibrating faradic current; current for diagnostic lamps; and sinusoidal current if from an alternating supply current.

THE SOURCE OF ENERGY of the No. 6 Plate may be either a direct lighting or power circuit of 110, 220 or 500 volts, or a battery of 43 dry or chloride of ammonium liquid cells (p. 24 and 25) which can be stored in an adjoining room or closet.

The alternating lighting current of 104-115 volts may be employed by passing it through a liquid rectifier (p. 23) so as to transform it to a direct current suitable to the needs of the apparatus. The alternating current in its original form may also be passed through the plate and administered as a *sinusoidal current*, a special switch being provided for this purpose at \$2.50 additional.

ACCESSORIES included are: conducting cords, universal handles, sponge discs and attachment plug with cord. Each outfit is carefully tested before shipment, is furnished with complete instructions and carries our absolute guaranty of perfection and quality.

## McINTOSH No. 6 PLATE IN STYLE "B" CASE



Price, including conducting cords, universal handles, sponge discs  
and series current tap with cord..... **\$45.00**

Our No. 6 Plate mounted in our Style "B" Case makes an admirable outfit  
for use on either wall or table.

The case is constructed of quarter sawed oak, in fine golden finish and  
the door is fitted with beveled plate glass. It measures 19 in. square and 11  
in. deep.

It can be very conveniently connected with the 110 volt direct current;  
or in connection with a rectifier may be operated by an alternating current.  
Cells may also be used as a source of supply but must be stored in some  
adjacent location.

Every feature of the No. 6 Plate is afforded by this neat, compactly  
arranged piece of apparatus and perfect satisfaction is offered the user.

SHIPPING WEIGHT, 90 LBS.

McINTOSH No. 6 PLATE IN STYLE "C" UPRIGHT  
FLOOR CABINET

AN  
ELEGANT  
CABINET  
BATTERY  
OUTFIT



Price, including conducting cords, universal handles and sponge discs..... **\$70.00**  
Price, with addition of 43 National No. 7 cells (p. 24)..... **82.50**  
Price, with 43 No. 6 Columbia dry cells (p. 25)..... **80.00**  
Dimensions: 70 inches high; 25 inches wide; 24 inches deep.  
SHIPPING WEIGHT, 290 LBS; WITH NATIONAL CELLS, 550 LBS;  
WITH DRY CELLS, 400 LBS.

## McINTOSH NO. 6 PLATE IN STYLE "E" TABLE CABINET



### PRICES

Wired for Alternating Current, including Alternating Current Rectifier (p. 23)..... \$7  
 Wired for 110 volt Direct Current..... **60.00**

This outfit, combining the compactness of arrangement of a wall plate with the convenience and easy mobility of a table plate, is an entirely new departure in electro-therapeutical apparatus. It makes a most suitable equipment for a hospital as it is mounted on casters and may be easily rolled from one ward to another.

It is particularly suitable to be used with the alternating current and when so arranged it offers the Sinusoidal current as well as the Galvanic and Faradic currents usually obtainable. When operated by the 110 volt direct current a wide range of Galvanic and Faradic work becomes available. The outfit includes conducting cords, universal handles and sponge discs.

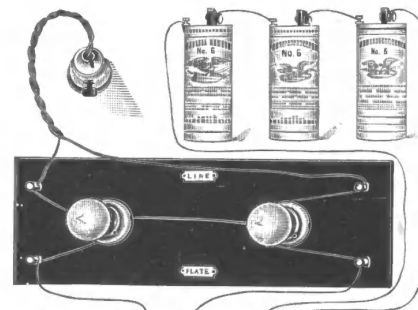
The table is constructed of quarter sawed oak, dark golden finish, and the protecting case is fitted with beveled plate glass. It measures 36 inches high, 32 inches wide and 26 inches deep.

SHIPPING WEIGHT, 200 LBS; WITH RECTIFIER, 240 LBS.

## McINTOSH No. 6 PLATE CONNECTED WITH 220 VOLT DIRECT CURRENT

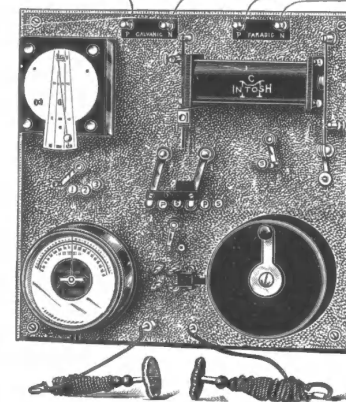
### OUTFIT FOR 220 VOLT CURRENT AS ILLUSTRATED

No. 6 Plate, only (p. 5)  
 complete ..... **\$35.00**  
 Reduction Board for  
 220 volt current..... **4.00**  
 3 No. 6 Columbia Dry  
 Cells ..... **.75**  
**\$39.75**



### OUTFIT FOR 500 VOLT CURRENT SIMILAR TO ILLUSTRATION

No. 6 Plate, only (p. 5)  
 complete ..... **\$35.00**  
 Reduction Board for  
 500 volts ..... **5.00**  
 3 No. 6 Columbia Dry  
 Cells ..... **.75**  
**\$40.75**



The above illustration shows the manner of connecting and operating the No. 6 Plate, only, in connection with the 220 volt direct current. A Reduction Board consisting of two 110 volt sixteen candle power lamps mounted on a handsome black enameled slate base and provided with suitable connections, is utilized to adapt the voltage of the current to the requirements of the plate. The galvanic circuit of the apparatus is thus operated in connection with the 220 volt current, while the faradic coil is supplied by three dry cells which accompany the outfit.

When the plate, only, is used in connection with the 500 volt direct current, we supply a Reduction Board of similar form which is fitted with five lamps connected in suitable manner, and dry cells are also furnished for the Faradic coil.

SHIPPING WEIGHT, EITHER OUTFIT, 60 LBS.

## SOME USES OF THE GALVANIC CURRENT IN GYNECOLOGY

BY ALBERT GOLDSPOHN, M. D.,

Prof. Gynecol.; Chicago Post-Graduate Medical School; Senior Surg. Evangelical Deaconess Hospital; Attending Gynecologist to the Post-Graduate Hospital; Mem. Amer. Academy of Med.; Amer. Assn. of Obstetricians and Gynecologists and International Periodical Congress of Obstetricians and Gynecologists; Mem. A.L.G.F.M.Q.

Electricity within the uterus should be used very sparingly, especially beyond the cervical canal, because (1), the repeated introduction of an electrode is liable to carry infection with it; (2), because the germicidal action of the galvanic current cannot be depended upon to extend beyond the escharotic effect, and (3), because the latter is very liable to be produced excessively in some accessible spots, and insufficiently or not at all in other parts of the endometrium, that are less or not at all accessible to the electrode whose curve or shape cannot be made to correspond to the unknown curves and contours of the interior surfaces and borders; therefore, the eschars produced in some places will become cultures for micro-organisms that remain on other parts of the endometrium. But it may be used carefully in some selected simple cases of chronic endometritis in uteri that are not retroverted nor flexed, have a sufficiently patulous canal and are free of inflammatory or other disorders of the adnexae and pelvic peritoneum.

The proper electrodes for such intra-uterine treatment with the positive pole are those illustrated in figure 1, which are active at the point, so that the acute angles of the triangular uterine cavity and the groove connecting the same in the fundus, can be treated.

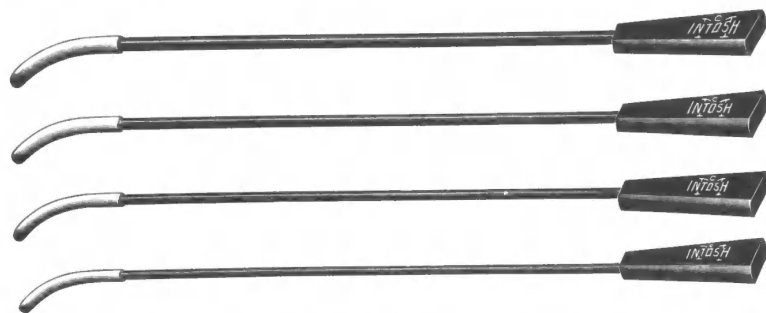


Figure 1, No. 119. Dr. Goldspohn's Copper Intra-Uterine Electrodes

But the active end of the electrode is only one and one-half inches long, so that when it has been introduced to the fundus no current is given off at the internal os, where otherwise the cauterization would become excessive, owing to the firm, continuous contact produced by a sphincter-like contraction there. Excessive cauterization of the internal os would lead to stenosis there and interference with uterine drainage,—a serious matter. For use, the electrode must be sterilized either by boiling three to five minutes in a 2% solution of sal soda in water or by standing just as long in a tall bottle filled with 95% carbolic acid and rinsed off in sterile water or alcohol; and the vaginal vault, cervix and external os must be well swabbed off, within a speculum, with 5% carbolic acid solution and the cervical canal cauterized with 95% of the same, before inserting the electrode.

But the more liberal, extensive and innocent use of the galvanic current is outside of the uterus, by the vagino-abdominal route with the copper ball electrode shown in figure 2.



Figure 2, No. 116. Dr. Goldspohn's Copper Ball Vaginal Electrode.

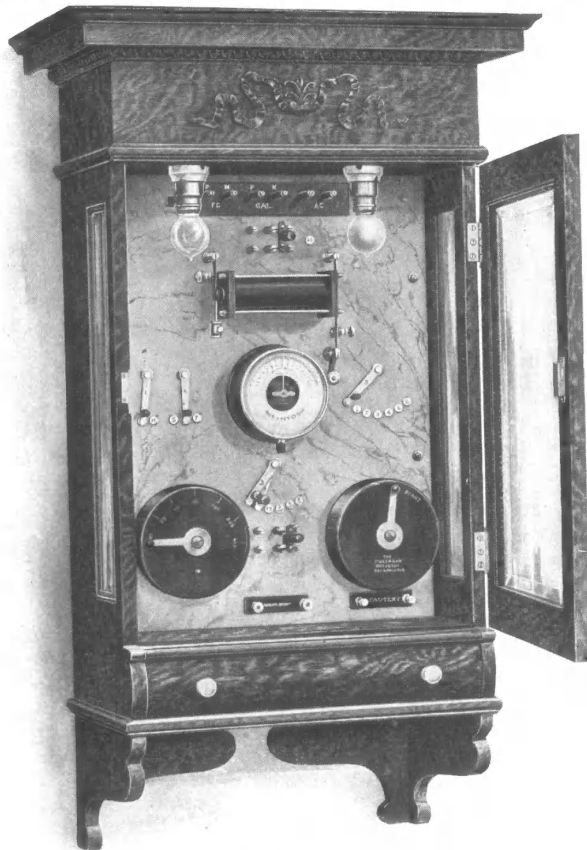
The numerous chronic tender and painful ovaries are often successfully quieted by 50 to 75 milliamperes or more applied for ten to fifteen minutes once or twice a week by this little ball crowded in beneath the ovary, which must previously be located by the finger,—provided that the ovary is not adherent in the bottom of the cul-de-sac—so that by pouching out the vaginal vault in the required direction the electrode may be placed under or behind the ovary. When relief of pain is the chief need, as during the first several sessions, the positive pole should be used upon this vaginal electrode and the tissues guarded against its cauterizing action by enveloping the ball with a firm layer of absorbent cotton which is slightly moistened in 5% carbolic acid solution to make it an innocent conductor. Later on when a resolvent effect is desirable, the cotton is wet in a solution of iodine containing  $\frac{1}{2}$  oz. iodine crystals and 1 oz. potass. iodide in a pint of dilute alcohol, and the negative pole is used, which, with a current of 75 to 100 milliamperes, liberates a part of the iodine by its electrolytic effect and carries it more deeply into the parts traversed by the current. This is very useful also, especially when combined with skillful vagino-abdominal pelvic massage, for old solidified exudates, and for indurations and contractions within the parametrium, likewise for painful hyperplastic conditions of the muscular uterine wall after endometritis has been eliminated, or to save such a uterus from removal after conservative surgery has exhausted itself by a curettement, an amputation of a diseased cervix and by correcting an old displacement.

Fibroid uteri should, as a rule, be treated surgically. The often repeated use of any electrode in these cases, within the uterus, too often proves a curse by bringing about a septic endometritis, salpingitis and peritonitis, conditions more serious than the tumors, which then force the patient to an operation under a surgical risk greatly increased. But, in patients whose general condition needs to be improved before operating, the excessive losses of blood may be prevented, while other restoratives are used, by sending a current of 100 or more milliamperes through the entire uterus with its tumors, by holding the cotton-covered ball electrode as the negative by one or two finger tips against the external os and crowding the same back and lifting the entire uterus so that the fundus will be brought into contact with the abdominal wall beneath the abdominal electrode, which must be borne down by a weight of 2 or 3 pounds, or by the other hand.

As an external electrode I prefer a bare rectangular plate of sheet metal, about 6 x 8 inches in size, with a binding post at one end and thick enough to retain any curve that may be given to it. Under this a separate mat of enough layers of old table linen quilted together, to make it  $\frac{1}{2}$  inch thick and about 7 $\frac{1}{2}$  x 9 $\frac{1}{2}$  inches large, is placed, after wringing it out in warm soap suds each time.



## McINTOSH THERAPEUTIC WALL CABINET No. 9



## PRICES

Arranged for 110 volt direct current or cells.....	\$75.00
Arranged for 220 volt direct current.....	77.50
Arranged for 500 volt direct current.....	80.00

## EMBRACING

The MacLagan Wire Rheostat, a High Tension Faradic Coil, Improved Milliamperemeter with Shunt, the McIntosh New Monomotive Rheotome, Dry Cell Caution Switch, New Energy Changing Switch, Pole Changer, Current Combiner, Etc.

## OFFERING

Galvanic, Interrupted Galvanic, Combined Galvanic and Faradic, High Tension Faradic, Primary Faradic, Combined Primary and Secondary Currents, Caution Current and Currents for Diagnostic Lamps.

## ENERGIZED BY

Direct Currents of 110, 220 and 500 volts.

Alternating Currents by means of a Rectifier.

Cells, either dry or liquid chloride of ammonium.

SHIPPING WEIGHT, EITHER OUTFIT, 165 LBS.

## McINTOSH THERAPEUTIC WALL CABINET No. 9

## POINTS OF ESPECIAL ADVANTAGE

THE SPECIAL FEATURES which distinguish the No. 9 Cabinet from the more simple outfits are as follows:

1. A HIGH TENSION FARADIC COIL containing a Secondary winding of 4,500 feet of No. 36 wire, tapped at 1,500 and 3,000 feet and connected with a Selective Switch; this feature is one recommended by leading writers on Electro-Therapeutics.

2. THE McINTOSH MONOMOTIVE RHEOTOME; its specially strong point being that ONE MOTION of the lever starts the mechanism, turns on the current and selects the frequency of interruption; this instrument tends toward greater simplicity of operation.

3. THE McINTOSH CURRENT COMBINER SWITCH, which allows of the combination of the Galvanic and Faradic or the Primary and Secondary currents. The more simple Wall Cabinets do not offer these blended currents.

4. AN ENERGY CHANGING SWITCH, enabling the plate to be energized by either of two different sources of energy; cutting off the current when at rest. This permits of the use of an alternating lighting current during the evening or a direct power circuit during the day. It also facilitates using the alternating as a Sinusoidal current.

## PRIME FEATURES

THE MACLAGAN WIRE RHEOSTAT is connected in the Galvanic and Faradic circuits and controls perfectly all varieties of these currents (including also the Sinusoidal current when used).

THE McINTOSH IMPROVED MILLIAMPEREMETER WITH SHUNT, scales reading 0 to 400 and 0 to 20, measures accurately the Galvanic current.

THE SWITCHBOARD is a highly polished plate of marble, measuring 18x24 inches—displaying the instruments in harmonious combination and facilitating ready operation.

THE CABINET WORK is built of quarter sawed oak, selected so as to show the beautiful grain to the best advantage, and is hand-rubbed to a brilliant polish in the popular dark golden finish; it is embellished with artistic carvings and with hardware of ornamental design. The large beveled plate glass in the door offers a full view of the switchboard and displays the outfit to the fullest advantage. It measures 44 inches high, 25 inches wide and 14 inches deep.

THE ACCESSORIES furnished are: Conducting Cords, universal handles and Sponge Discs.

## LIST OF OUTFITS

## Outfit No. 31. 110 Volt Direct Current.

McIntosh No. 9 Therapeutic Wall Cabinet.....	\$ 75.00
Twelve No. 6 Columbia Dry Cells for cautery (in neat case) (p. 25).....	4.50
Therapist's Assortment, No. 5 (p. 73).....	15.00
Perfection Caution-Illuminator Set, No. 6 (p. 54).....	12.00
Total.....	\$106.50

SHIPPING WEIGHT, 225 LBS.

## Outfit No. 34. 110 Volt Alternating Current.

McIntosh No. 9 Therapeutic Wall Cabinet.....	\$ 75.00
Twelve No. 6 Columbia Dry Cells for cautery (in neat case) (p. 25).....	4.50
McIntosh Alternating Current Rectifier (p. 23).....	15.00
Practitioner's Electrode Set, No. 3 (p. 71).....	10.00
Climax Caution-Illuminator Set, No. 7 (p. 55).....	5.00
Total.....	\$109.50

SHIPPING WEIGHT, 265 LBS.

## Outfit No. 35. Battery Operation.

McIntosh No. 9 Therapeutic Wall Cabinet.....	\$ 75.00
Twelve No. 6 Columbia Dry Cells for cautery (in neat case) (p. 25).....	4.50
Forty National No. 7 Cells, at 30 cents each (p. 24).....	12.00
Practitioner's Electrode Set, No. 3 (p. 71).....	10.00
Climax Caution-Illuminator Set, No. 7 (p. 55).....	5.00
Total.....	\$106.50

SHIPPING WEIGHT, 475 LBS.



# McINTOSH No. 9 THERAPEUTIC PLATE IN STYLE "C" UPRIGHT FLOOR CABINET



A VERY  
CON-  
VENIENT  
BATTERY  
OUTFIT

Price, including conducting cords, universal handles and sponge discs. . . . . \$ 95.00  
Price, with addition of 43 National No. 7 cells (p. 24) . . . . . 107.50  
Price, with 43 No. 6 Columbia dry cells (p. 25) . . . . . 105.00  
Dimensions: 70 inches high; 25 inches wide; 24 inches deep.  
SHIPPING WEIGHT, 315 LBS; WITH NATIONAL CELLS, 575 LBS;  
WITH DRY CELLS, 425 LBS.

# McINTOSH No. 9 THERAPEUTIC PLATE IN STYLE "E" TABLE CABINET



## PRICES

Wired for Alternating Current, including Alternating Current Rectifier . . . . . \$100.00  
Wired for 110 volt Direct Current . . . . . 85.00

This apparatus offers all of the special features of our No. 9 Therapeutic Plate, with the added convenience of being in table form; thus permitting of its being readily moved about.

It makes a most suitable outfit for the alternating current, and in that connection offers a great variety of Galvanic, Faradic and Sinusoidal currents. When operated by the 110 volt direct current it affords a wide range of Galvanic and Faradic currents. The outfit includes conducting cords, universal handles and sponge discs.

The cabinet work represents a handsome library table of quarter sawed oak, in fine dark golden finish, the case being fitted with beveled plate glass. It measures 36 in. high, 32 in. wide and 26 in. deep.

SHIPPING WEIGHT, 225 LBS.; WITH RECTIFIER, 265 LBS.

## PHYSICS, PHYSIOLOGY AND THERAPY OF THE FARADIC CURRENT

By H. C. BENNETT, M. D., M. E., M. Ph-Th., Lima, O.

Author, "The Electro-Therapeutic Guide."

Editor, "The Electro-Therapeutist."

The primary faradic current is really an interrupted galvanic current with the added magnetic properties imparted to it, from its immersion in the electro-magnetic field of the core, which gives it more potential. The primary has but little power of penetration and, therefore, the effects are superficial and its usefulness limited, but, when a paralyzed nerve is superficial, it may be stimulated by the primary current.

On account of the amperage or current strength of the primary, it will cause powerful contractions of the superficial muscles. This current is more stimulating and irritating than is the secondary, hence it will increase the capillary circulation in the skin and is used to good advantage in this way as a tonic stimulant in conjunction with the electro-vapor bath. The primary current is uni-directional, but is interrupted with the frequency corresponding to the "make" and "break" of the vibrator. Coming from the primary cells, it has feeble galvanic properties, being both electrolytic and phoric to a slight degree, but its chief action upon the living organism is as an excitant to contractile tissue and a stimulant to sensory nerves, by reason of the interruptions, which cause sudden variations of the potential. The very suddenness of this change in the electro-motive force makes this current a powerful stimulant for exciting muscular contractions and arousing the action of the sensory nerves and the promotion of tissue metabolism.

The secondary induced current differs radically from the primary in every way, both in production and effects. The secondary coil current is the purely induced current and has no available amperage or current strength, and, therefore, no electrolytic (chemical), or any phoric effects. Through the process of induction the voltage is enormously increased, so that it has great power of penetration, and will influence deep-seated conditions.

On account of the rapid hysteresis in the primary field, there is produced a fluctuation in the secondary potential, which imparts to the secondary coil current a to-and-fro or alternating character. Therefore, the secondary current has no fixed polarity, but there is a difference in the rise and fall of this potential, which gives to it a slight polar effect, but which is entirely mechanical.

The current induced by the "make" is slower than the reverse current induced by the "break," in the primary. The electro-motive force is varied by the rapidity of the interruptions and by the size and length of the wire on the secondary coil. If the interruptions are very rapid and the coil composed of many turns of fine wire, the resulting current, though interrupted, begins to resemble, in physical properties, the sinusoidal modality. The approach to and departure from the highest and lowest potential, in each period, is, by this construction, made more gradual, and the physiological effects are as stimulants and not irritants, therefore, it is a tonic and sedative to both motor and sensory nerves.

This current is what constitutes the so-called "high tension" current, which has a decided analgesic or anaesthetic effect, and will relieve pain.

The secondary current will contract muscles, the interruptions being so rapid that the muscles do not have time to relax between the interruptions, therefore, the muscles will remain in a state of clonic spasm as long as the current flows. There being no chemical effect to the secondary current on account of the absence of amperage, the pain is relieved in an irritated nerve through a process of tetanization of the nerve.

The current from a short, coarse secondary coil is rough, harsh and irritating, and, therefore, painful, and when ignorantly or carelessly applied is often injurious. The cheap batteries, commonly found in the stores and sold to the laity for self-treatment, are usually of this character, and by them many have been "shocked" till they are fearful of all kinds.

In some cases of paralysis, where it is desired to get powerful stimulation, this current is indicated. Likewise in cases of narcosis, drowning, asphyxia, poisoning, etc., this current may be used to advantage to induce and keep up artificial respiration.

The best induction coil for the general practitioner or electro-therapist is one in which the strength of the primary can be changed and in which the number of the primary interruptions may be regulated, by means of both slow and rapid vibrators, and in which the secondary contains at least 3,000 feet of No. 36 wire and with another thousand or fifteen hundred feet more, which may be added when desired, for the sedative effect. The primary coil should have about 200 feet of No. 20 wire.

The primary currents are useful in producing superficial stimulation, equalizing capillary circulation, and in giving general tonic treatments.

The coarse secondary coil currents are indicated for powerful stimulation, such as for massage effects in atrophy, paralysis, perversion of cutaneous sensibility, and in relaxed and sluggish states of the bowels, and glandular system, narcosis, etc.

The high tension or long, fine wire coil currents are indicated in deep-seated nervous and painful conditions, as ovaritis, neuralgia, and sub-acute and chronic engorgements, due to vaso-motor paralysis, and in depraved states where there is need of stimulation of tissue metabolism and retrograde metamorphosis.

## McINTOSH UNIVERSAL WALL CABINET No. 8



Gives  
Galvanic  
High-  
Tension  
Faradic  
Sinusoidal  
Cautery  
and  
Diagnostic  
Lamp  
Currents

Operates  
on  
Direct  
or  
Alternating  
Circuit  
of  
110 Volts

Price.....\$120.00

## EMBODIES

The MacLagan Wire Rheostat, the McIntosh Improved Milliamperemeter with Shunt, the New McIntosh Monomotive Rheotome, a High Tension Faradic Coil, the McIntosh Cautery Transformer, McIntosh Current Combiner Switch, Pole Changer and the necessary switches and binding posts.

SHIPPING WEIGHT, 325 LBS.

## McINTOSH UNIVERSAL WALL CABINET No. 8

THE SWITCHBOARD is a plate of highly polished Tennessee marble, measuring 18 x 24 inches, upon which are mounted in harmonious combination the various instruments for controlling, directing and measuring the various currents; and the switches are placed so as to facilitate ready operation.

THE CABINET is built of selected quarter sawed oak, finished with a beautiful polish, in the popular golden oak color and is fitted with beveled plate glass door and embellished with artistic carvings and hardware. The base contains a drawer for storage of electrodes and a closet with ample room for 40 National No. 7 or Columbia No. 6 cells or the Motor Generator or Rectifier. It measures 70 in. high, 25 in. wide and 24 in. deep.

THE ACCESSORIES accompanying the outfit consist of one pair of conducting cords and one pair of universal handles with sponge discs.

THE MODALITIES AVAILABLE are the Galvanic Current, Interrupted Galvanic Current, Combined Galvanic and Faradic Currents, Primary Faradic Current, High Tension Faradic Current, Combined Primary and Secondary Currents, Sinusoidal Current, Cautery Current and Currents for Diagnostic Lamps.

THE GALVANIC CIRCUIT of this apparatus may be operated by the 110 volt direct current; or by the alternating current in connection with a Rectifier; when no commercial current is available, this part of the apparatus may be operated by a battery of forty cells.

THE FARADIC CIRCUIT consists of a High Tension Coil with a primary winding of coarse wire and a secondary winding of 4,500 feet of No. 36 wire, tapped at 1,500 and 3,000 feet.

THE CAUTERY CIRCUIT consists of the McIntosh Cautery Transformer, which must be energized by an alternating current and may be operated in connection with the commercial alternating lighting circuit of 110 volts; or with the direct current of 110 volts, by means of a Motor Generator.

THE SINUSOIDAL CIRCUIT is operated in connection with an alternating lighting circuit; or with a direct current, by means of a Motor Generator, p. 52.

The DIRECT CURRENT when accessible may be used to operate the Galvanic circuit; and by means of a Motor Generator, p. 52, will furnish the required energy for the Cautery and Sinusoidal circuits.

THE ALTERNATING CURRENT when available can be used to operate the Cautery and Sinusoidal circuits; and by means of a Rectifier, p. 23, will furnish proper energy for the Galvanic circuit.

A BATTERY OF CELLS can be used to operate the Galvanic circuit, but cannot be employed for the Cautery and Sinusoidal circuits.

## LIST OF OUTFITS

## OUTFIT No. 21. 110 VOLT DIRECT CURRENT

McIntosh Universal Wall Cabinet, No. 8.....	\$120.00
Motor Generator, $\frac{1}{4}$ -H. P., 110 V., D. C. (p. 52).....	30.00
Practitioner's Electrode Set, No. 3 (p. 71).....	10.00
Climax Cautery-Illuminator Set, No. 7 (p. 55).....	5.00

Total.....\$165.00

SHIPPING WEIGHT, 360 LBS.

## OUTFIT No. 22. 110 VOLT ALTERNATING CURRENT

McIntosh Universal Wall Cabinet, No. 8.....	\$120.00
McIntosh Alternating Current Rectifier (p. 23).....	15.00
Therapeutist's Assortment, No. 5 (p. 73).....	15.00
Perfection Cautery-Illuminator Set, No. 6 (p. 54).....	12.00

Total.....\$162.00

SHIPPING WEIGHT, 375 LBS.

## McINTOSH COMBINATION WALL CABINET No. 10



Price.....	<b>\$100.00</b>
Price, complete, including Rectifier for operation on an alternating circuit of 110 volts.....	<b>115.00</b>
Price, complete, including Motor Generator for operation on a direct circuit of 110 volts.....	<b>130.00</b>

The outfit comprises the marble switchboard shown on page 20 mounted in a more compact and simple form of cabinet designed to be hung upon the wall. The range of work and adaptability offered is precisely the same as that of the No. 8 outfit, while the additional advantage of economy of floor space is also presented.

The apparatus may be energized by either alternating or direct circuit of 110 volts in the same manner as the No. 8 cabinet; and a wide range of Galvanic, Galvano-Faradic, High-Tension Faradic, Sinusoidal, Cautey, and Diagnostic Lamp Currents are made available.

The cabinet work is of selected, kiln-dried, quarter sawed oak finished with a brilliant polish in the popular, dark golden oak color; measuring forty-four inches in height, twenty-five inches at greatest width and fourteen inches in depth; and contains a drawer to accommodate the conducting cords, universal handles and sponge disc electrodes accompanying the outfit or any other electrodes used.

SHIPPING WEIGHT, 175 LBS.; WITH RECTIFIER, 215 LBS.; WITH MOTOR GENERATOR, 200 LBS.

## McINTOSH ALTERNATING CURRENT RECTIFIER



Price, complete..... **\$15.00**

This apparatus is an adaptation of the Noden valve; an instrument successfully employed in Europe for the conversion of alternating to uni-directional currents. The device is of a chemical nature and operates on the principle of transposing the reverse waves; the resultant output being a direct current possessing the polar properties required in galvanism.

It consists of four glass jars filled with a chemical solution into which are immersed metallic electrodes; the whole greatly resembling a group of primary battery cells; the similarity being merely in appearance, however, as these cells do not generate any current whatever; neither does any consumption of electrode surface nor exhaustion of the chemical solution take place. In the course of a year or so the liquid will evaporate, requiring replenishment.

The Rectifier is put up in a neat polished oak case; the cover consisting of a plate of highly polished marble 11½ inches square, which forms a switchboard for the regulation and direction of the current. A 32 candle power lamp permits of a flow of current of correct volume and a double pole knife switch allows of a complete cut-off, so that no waste takes place during periods of inactivity. A number of binding posts provide for attachment of the main wires and for connection from the rectifier to the wall cabinet.

SHIPPING WEIGHT, 40 LBS.

## NATIONAL No. 7 CELL



Price, complete .....	\$ 0.30
Jar only .....	.12
Carbon element only .....	.15
Zinc only .....	.05
Sal ammoniac, per package .....	.05
Price of 43 cells, complete .....	12.50
(A sufficient number for wall plate.)	

The carbon element and the cover of this cell constitute one solid piece of carbon, with connections on top so placed that there is but little chance of corrosion. The carbon cover fits tightly, so that there is almost no evaporation. The jar measures  $4\frac{1}{2} \times 4\frac{1}{2} \times 6\frac{1}{2}$  inches, while the total height of the cell is 8 inches. The top of the jar is thoroughly coated with paraffine, and the upper portion of the carbon element and the cover are boiled in paraffine, so that there is no climbing up of salts by capillary action. Its voltage will average 1.5; forty cells connected in series yielding about sixty volts, sufficient to supply the galvanic part of a wall plate. Three cells connected in series afford an excellent means of operating a faradic coil.

We recommend the above as the most economical cell for the operation of a wall plate. Forty-three cells give about a year's service, at the end of which time they can be re-charged and made good as new at a cost of about ten cents per cell.

They can be stored in an adjoining room if necessary; about ten feet of shelving twelve inches wide will suffice for forty-three cells.

SHIPPING WEIGHT, 43 CELLS, 260 LBS.

## COLUMBIA DRY CELLS



THE NO. 4 COLUMBIA DRY CELL, size  $1\frac{1}{2} \times 4$  inches, is a very convenient and reliable form for use in portable outfits, owing to its compact form.

When used in a galvanic battery it lasts for six or nine months, but when employed in connection with a faradic coil it requires replacement in from three to six months.

We use the No. 4 Cell in the No. 44 Massage Battery, Electrolysis Battery, 14-Cell, 27-Cell and 45-Cell Batteries.

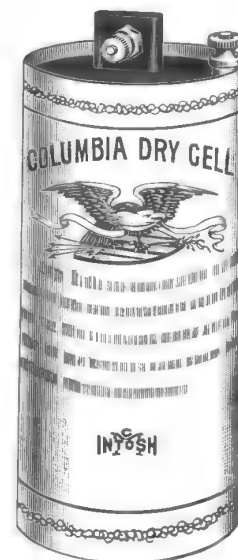
Price, No. 4 Columbia Dry Cell, each .....	\$0.20
Or if postpaid .....	.35

THE NO. 6 COLUMBIA DRY CELL, size  $2\frac{1}{2} \times 6$  inches, is a very satisfactory cell for use in connection with a wall plate or with any kind of galvanic or faradic apparatus. When employed in such manner it will give service for a period of nine to twelve months with ordinary usage.

Being of much more compact form than the National No. 7 Cell, it is especially convenient in cases where it is difficult to store the larger one. Its first cost is also much less owing to its lighter shipping weight.

Dry cells contain a certain quantity of moisture which becomes entirely evaporated in about a year after date of manufacture, after which they are no longer serviceable; making it necessary to discard and replace them with new ones

Price, No. 6 Columbia Dry Cell, each ....	\$ 0.25
Or if postpaid .....	.60
Price, 43 No. 6 Columbia Dry Cells ....	10.00
(a sufficient number to operate a wall plate)	



SHIPPING WEIGHT, 43 NO. 6 CELLS, 110 LBS.

## LIST OF OUTFITS

## Outfit No. 26. 110 Volt Direct Current.

McIntosh Combination Wall Cabinet, No. 10 (p. 22)	\$100.00
Motor Generator, $\frac{1}{2}$ H. P., 110 V., D. C. (p. 52)	30.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Climax Caution-Illuminator Set, No. 7 (p. 55)	5.00
Total	\$145.00

SHIPPING WEIGHT, 210 LBS.

## Outfit No. 27. 110 Volt Alternating Current.

McIntosh Combination Wall Cabinet, No. 10 (p. 22)	\$100.00
McIntosh Alternating Current Rectifier (p. 23)	15.00
Therapist's Assortment, No. 5 (p. 73)	15.00
Perfection Caution-Illuminator Set, No. 6 (p. 54)	12.00
Total	\$142.00

SHIPPING WEIGHT, 225 LBS.

## Outfit No. 30. Alternating Current and Cells.

(For use with cells in daytime and lighting current in evening.)

McIntosh Combination Wall Cabinet, No. 10 (p. 22)	\$100.00
40 National No. 7 Chloride of Ammonium Liquid Cells (p. 24)	12.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Climax Caution-Illuminator Set, No. 7 (p. 55)	5.00
Total	\$127.00

SHIPPING WEIGHT, 445 LBS.

## Outfit No. 36. 110 Volt Direct Current.

McIntosh No. 6 Plate in Style "A" Wall Cabinet (p. 6)	\$ 50.00
Therapist's Assortment, No. 5 (p. 73)	15.00
Total	\$ 65.00

SHIPPING WEIGHT, 150 LBS.

## Outfit No. 37. 110 Volt Alternating Current.

McIntosh No. 6 Plate in Style "A" Wall Cabinet with Sinusoidal switch (p. 6)	\$ 52.50
McIntosh Alternating Current Rectifier (p. 23)	15.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$ 77.50

SHIPPING WEIGHT, 190 LBS.

## Outfit No. 38. Battery Operation.

McIntosh No. 6 Plate in Style "A" Wall Cabinet (p. 6)	\$ 50.00
43 National No. 7 Cells (p. 24)	12.50
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$ 72.50

SHIPPING WEIGHT, 400 LBS.

## Outfit No. 40. 110 Volt Direct Current.

McIntosh No. 6 Plate in Style "B" Case (p. 8)	\$ 45.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$ 55.00

SHIPPING WEIGHT, 100 LBS.

## Outfit No. 41. 110 Volt Alternating Current.

McIntosh No. 6 Plate in Style "B" Case (p. 8)	\$ 45.00
McIntosh Alternating Current Rectifier (p. 23)	15.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$ 70.00

SHIPPING WEIGHT, 140 LBS.

## Outfit No. 42. Battery Operation.

McIntosh No. 6 Plate in Style "B" Case (p. 8)	\$ 45.00
43 No. 6 Columbia Dry Cells (p. 25)	10.00
Ideal Electrode Set, No. 4 (p. 72)	5.00
Total	\$ 60.00

SHIPPING WEIGHT, 210 LBS.

## LIST OF OUTFITS

## Outfit No. 43. Battery Operation.

McIntosh No. 6 Plate in Style "C" Upright Floor Cabinet (p. 9) including 43 National No. 7 Cells (p. 24)	\$ 82.50
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$ 92.50

SHIPPING WEIGHT, 560 LBS.

## Outfit No. 44. Battery Operation.

McIntosh No. 6 Plate in Style "C" Upright Floor Cabinet (p. 9) including 43 No. 6 Columbia Dry Cells (p. 25)	\$ 80.00
Therapist's Assortment, No. 5 (p. 73)	15.00
Total	\$ 95.00

SHIPPING WEIGHT, 410 LBS.

## Outfit No. 45. 110 Volt Direct Current.

McIntosh No. 6 Plate in Style "E" Table Cabinet (p. 10)	\$ 60.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$ 70.00

SHIPPING WEIGHT, 210 LBS.

## Outfit No. 46. 110 Volt Alternating Current.

McIntosh No. 6 Plate in Style "E" Table Cabinet (p. 10) including McIntosh Alternating Current Rectifier (p. 23)	\$ 75.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$ 85.00

SHIPPING WEIGHT, 250 LBS.

## Outfit No. 47. Battery Operation.

McIntosh No. 9 Therapeutic Plate in Style "C" Upright Floor Cabinet (p. 16) including 43 National No. 7 Cells (p. 24)	\$107.50
Therapist's Assortment, No. 5 (p. 73)	15.00
Total	\$122.50

SHIPPING WEIGHT, 585 LBS.

## Outfit No. 48. Battery Operation.

McIntosh No. 9 Therapeutic Plate in Style "C" Upright Floor Cabinet (p. 16) including 43 No. 6 Columbia Dry Cells (p. 25)	\$105.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$115.00

SHIPPING WEIGHT, 430 LBS.

## Outfit No. 49. 110 Volt Direct Current.

McIntosh No. 9 Therapeutic Plate in Style "E" Table Cabinet (p. 17)	\$ 85.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$ 95.00

SHIPPING WEIGHT, 235 LBS.

## Outfit No. 50. 110 Volt Alternating Current.

McIntosh No. 9 Therapeutic Plate in Style "E" Table Cabinet (p. 17) including McIntosh Alternating Current Rectifier (p. 23)	\$100.00
Practitioner's Electrode Set, No. 3 (p. 71)	10.00
Total	\$110.00

SHIPPING WEIGHT, 275 LBS.



## MacLAGAN WIRE RHEOSTAT



Price, mounted on polished oak base, fitted with four binding posts. . . . . \$7.50

The rheostat illustrated above represents the fruitage of many months of unremitting toil, and embodies the results of constant experiment. The especial object sought after has been the production of an instrument of wire resistance capable of fulfilling the demand for a reliable and satisfactory therapeutic current controller, and yet sufficiently compact in form to readily fit into a compass of six inches in diameter.

The material used is a special composition wire of very high resistance and the durability of the wire as regards freedom from overheating or accidental breakage we can heartily vouch for.

The construction of the graduated scale of resistance is according to an original and striking plan whereby we obtain gradations of infinitesimal size and immunity from wear on the part of the traveling contacts.

The lever is revolved clockwise, beginning at the word start, and the current is thus turned on from zero to the full potential without the least shock or unpleasant sensation to the patient, owing to the entire uniformity of the gradations.

The rheostat is wired in shunt so that the patient is never directly in the path of the main circuit thus assuring perfect safety in its employment with commercial circuits; when the instrument is operated in connection with the 110 volt circuit a lamp must be placed in series with the supply binding posts, and this may be accomplished by the permanent connection of a lamp and socket or may be very readily effected by the use of the Series Current Tap shown on page 32.



Price, unmounted. . . . . \$6.00

The above illustration shows the MacLAGAN Wire Rheostat in an unmounted form suitable for attaching to a wall plate or other base. The instrument is six inches in diameter and will readily fit into the place occupied by any six-inch rheostat. It is provided with connections and screw holes on the back, so that it may be easily connected into circuit.

SHIPPING WEIGHT, MOUNTED, 4 LBS.; UNMOUNTED, 2½ LBS.

## McINTOSH IMPROVED MILLIAMPEREMETER WITH SHUNT



Price. . . . . \$10.00

We here illustrate our Improved Carpentier-Deprez Type of Milliampere-meter with Shunt, diameter 5½ inches, reading 0 to 400 and 0 to 20, such as is furnished on our Nos. 6, 8, 9 and 10 Wall Plates; a most accurate and sensitive instrument, offering a wide range of reading. It is provided with a shunt which permits of a double reading, this shunt being controlled by a plug in the front of the case of the meter.

WHEN THE PLUG IS IN the reading is obtained from the lower scale, 0 to 400, figures in black, each small subdivision being 5 milliamperes.

WHEN THE PLUG IS OUT the meter registers on the upper scale, 0 to 20, figures in red, each small subdivision being ½-milliampere.

We recommend this shunt combination meter as very satisfactorily supplying the needs of those practitioners devoted to the more delicate operations of the eye and brain where currents of a fraction of a milliampere are often required as well as those physicians doing heavier work who desire large currents.

Combining as it does two instruments in one, there is probably no instrument on the market offering such a wide range of reading and accuracy of measurement at so low a price.

SHIPPING WEIGHT, 2½ LBS.

## McINTOSH IMPROVED MILLIAMPEREMETER 0-100



Price..... \$9.00

Realizing the imperative need of a reliable Milliamperemeter of a type which will not be affected by outside magnetic influence, sensitive and accurate, and yet a meter which can be sold at a price within the reach of every practitioner, we offer the McIntosh Improved Carpentier-Deprez Type Milliamperemeter as fulfilling these requirements. This meter may be used in either a horizontal or vertical position, a feature of importance.

We desire to call special attention to the adjustable dial; the nickel plated knob in front of case permits movement of the dial to adjust the needle to zero, thus overcoming all difficulty arising from the needle being thrown out of adjustment by rough usage.

If it is found that the needle does not rest on zero, it is only necessary to move the dial backward or forward until the adjustment is perfect.

The range of reading is from 0 to 100, each scale subdivision being one milliampere. The diameter of the case is  $5\frac{1}{4}$  inches.

We commend this meter as a most desirable and valuable measuring instrument, furnishing sufficiently high reading for a wide range of electro-therapeutic work, the scale subdivisions permitting a reading of one milliampere with perfect distinctness. The instrument having no unduly fragile working parts, it is not liable to get out of adjustment under any ordinary conditions of usage.

SHIPPING WEIGHT,  $2\frac{1}{2}$  LBS.

## McINTOSH IMPROVED MILLIAMPEREMETER, POCKET FORM

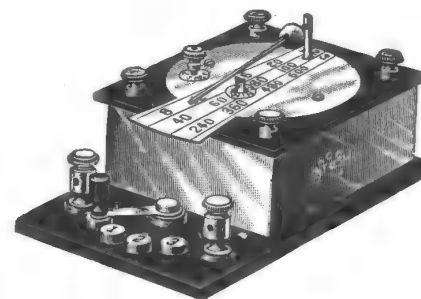


Price..... \$8.00

The range of reading is from 0 to 150, each subdivision being two milliamperes. It is four inches in diameter and it has the adjustable dial, as in the larger form, for convenience of the practitioner who desires a portable milliamperemeter.

SHIPPING WEIGHT, 2 LBS.

## McINTOSH GRADUATED AUTOMATIC RHEOTOME



Price..... \$8.00

This instrument may be adjusted so as to furnish from 8 to 660 interruptions per minute. It may be introduced into either the Faradic or Galvanic circuit, and can be used with any style of battery.

SHIPPING WEIGHT, 4 LBS.

## SERIES CURRENT TAPS



Edison



Thompson-Houston



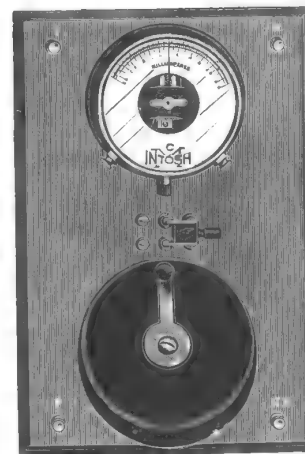
Westinghouse

Price, each.....	\$1.00	Postage 5c
Price, including 6 ft. cord .....	1.25	8c

The purpose of this device is to afford a simple and convenient method of placing a lamp in series with some form of apparatus operated in connection with the electric light current. It is particularly intended for use with apparatus with which a resistance lamp is not already furnished. When connecting a Rheostat or Switchboard to the electric light current it becomes absolutely necessary to protect the apparatus from an overflow of current by wiring a lamp (usually 16 C. P.) in series, so as to regulate the flow of current, and this appliance makes this task a very simple one; as it is simply necessary to screw the current tap into any lamp socket, insert a resistance lamp in the socket of the tap and attach the cords to the apparatus.

When ordering, please state style of lamp socket, whether Edison, Thompson-Houston or Westinghouse.

## McINTOSH GALVANIC SWITCHBOARD



Price, including conducting cords, universal handles and sponge discs .....	\$18.00
Price, series current tap with cord.....	1.25

The Switchboard illustrated above consists of a base of highly polished marble,  $9\frac{1}{2} \times 16$  inches, upon which are mounted the McIntosh Improved Milliampere-meter with Shunt, MacLagan Wire Rheostat, together with Pole Changer and the necessary binding posts for the supply current and for the patient's circuit.

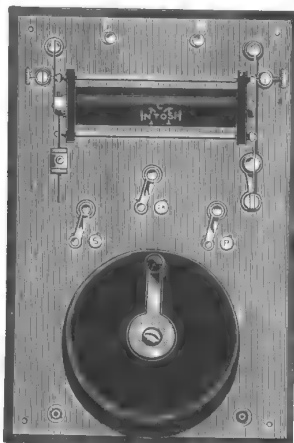
This apparatus is especially convenient for the administration of the galvanic current and is particularly suitable for dermatologists who desire to employ the direct lighting current for such work as electrolysis in facial blemishes, etc.

It may be connected with the 110 volt direct current, placing a 16 C. P. lamp in series, or, in conjunction with an Alternating Current Rectifier, it may be employed very satisfactorily with the alternating current. A battery of cells, either liquid or dry, will answer equally well.

This Switchboard is of very compact form and can be either placed upon a table or mounted on the wall.

SHIPPING WEIGHT, 24 LBS.

## McINTOSH FARADIC BATH TUB SWITCHBOARD



Price, including conducting cords, universal handles and sponge discs	\$16.00
Price, series current tap with cord	1.25
Price, three No. 6 Columbia dry cells	.75
Price, pair of movable bath tub electrodes	2.50
Price, pair of waterproof bath cords	1.50

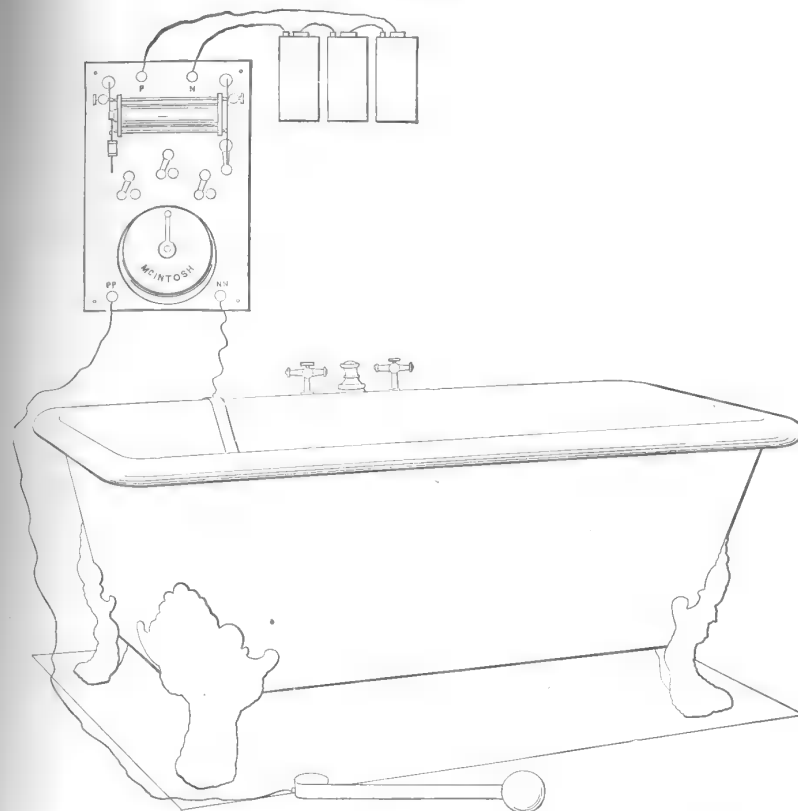
The above cut shows our Bath Tub Switchboard. The base is a plate of highly polished marble, 9½x16 inches, upon which is mounted a Faradic Coil provided with two vibrators, one for giving coarse vibrations for the purpose of massage; the other a ribbon vibrator or so-called "Singing Rheotome," which gives a high rate of vibration and is especially adapted for producing local anaesthesia; MacLagan Wire Rheostat, with all necessary switches for selecting Primary and Secondary Faradic Currents, together with the necessary binding posts to connect with the supply current and with the patient's circuit. The Secondary Winding consists of 1,300 feet of No. 30 wire, wound in 3,500 turns. The Primary consists of 230 feet of No. 20 wire, wound in 860 turns. The coil may be excited with three dry or liquid cells, or can be operated in series with a 16 C. P. 110 volt lamp on direct current lighting circuits. When the latter is used, a series current tap should be employed to place a lamp in series with the apparatus. (See p. 32.)

The quality of strength of the current in either the Primary or Secondary is perfectly controlled by the Wire Rheostat, thus giving the operator absolute command and regulation of the widest range of therapeutic application. The slowly pulsating current from the weighted vibrator is especially beneficial in bath treatment.

The greater range of adaptability of this Faradic Apparatus is either electric bath or electric massage treatments, and its perfect adaptability for every possible demand for Faradism in either the home, the bath parlor or the sanitarium, has brought this switchboard into universal favor. It may be used in any bathroom in connection with any porcelain or porcelain-lined iron tub, the movable bath tub electrodes being placed in any desired position on opposite sides or ends of the tub, thus permitting application of the current to any portion of the body of the patient.

SHIPPING WEIGHT, SWITCHBOARD, 26 LBS.

## DIAGRAM SHOWING BATH TUB SWITCHBOARD IN USE



A Maximum of Convenience and Efficiency at a Minimum of Expense

## MOVABLE BATH TUB ELECTRODE



Price, per pair ..... \$2.50

Postage  
36c

## MacLAGAN THERAPEUTIC SWITCHBOARD



Price, including conducting cords, universal handles and spongio discs..... **\$15.00**

The illustration shows the MacLagan Wire Rheostat (same as described on page 28), mounted on a polished marble plate, measuring 10 x 15 inches; together with a double pole, double throw cutoff switch and a lamp wired in series with the Rheostat; as well as pole changer in the patient's circuit and the necessary binding posts for the supply wires and patient. Especial attention is called to the fact that the form of pole changer and cutoff switches supplied is that of our new and very substantial design which differs from the ordinary type of knife pole changer.

The especial object of the double throw cutoff switch is to facilitate the ready connection of the Rheostat with either one of two sources of energy available in the physician's office, thus connection may be had on one side with a direct dynamo current of 110 volts, a lamp being in series; or, on the other hand, with a battery of cells without resistance lamp intervening.

The physician whose office is lighted by the 110 volt alternating current may connect this to one side of the switchboard and utilize this current for SINUSOIDAL APPLICATION; and he can make connection with a battery of from twenty to forty cells, either liquid or dry (chloride of ammonium), for work in galvanism.

Diagnostic Lamps of varieties consuming  $\frac{1}{2}$ -ampere or less may be successfully illuminated in connection with this device on either the direct or alternating current of 110 volts, o. with a battery of cells. It will, therefore, be perceived that the range of employment of this little board is very comprehensive, and it recommends itself to the practitioner not making any considerable specialty of electro-therapeutics, but who has need of a good, carefully designed current controller.

SHIPPING WEIGHT, 23 LBS.

## THE PHYSIOLOGY AND THERAPEUTICS OF THE SINUSOIDAL CURRENT

FRANKLIN PATTERSON, M. D.,  
Sioux Falls, South Dakota.

"A Sinusoidal Current is an alternating induced current in which the E. M. F. is so varied that its rise and fall in a positive direction are immediately succeeded without a break by an exactly corresponding fall and rise in the negative direction, and this rise and fall in both directions would, if graphically illustrated, describe a sine curve."

To my mind the most graphic illustration of this sine curve or wave, of the Sinusoidal current, is the long ocean swell or the summer breeze gently undulating a field of standing grain. This beautiful smoothness, in contradistinction to the abrupt interruptions of induction coil currents, makes it especially valuable in those conditions where a large amount of current is desired, without producing pain or depressing vitality, and where the induced current is ineffectual, because of its comparatively superficial action.

In atonic visceral conditions, we have no more effectual agent than the Sinusoidal current. Its peculiar properties of exciting contraction, both of striated and nonstriated muscular tissue painlessly, make it invaluable in the treatment of Chronic Gastro-Intestinal disorders. I have many times been able to relieve the most obstinate cases of constipation which have repeatedly failed to be more than temporarily benefited by other methods.

In Chronic Cystitis, especially those cases associated with enlarged Prostate, the results are particularly gratifying, and when used alternately with the constant current, the final result will be more than satisfactory, to both physician and patient.

Seminal Vesiculitis, Prostatitis, Varicocele, Atrophied Testicles, in fact any condition where there is loss of tone, or nutrition is impaired, the Sinusoidal is the current par excellence.

All forms of Neuritis, whether acute or chronic, and many Neuralgias, are cured, where the use of other currents has proven unavailing.

The remarkable properties, tonic, stimulant, and sedative, produced by this current, together with its profound effect on nutrition, make it an almost indispensable addition to the armamentarium of the physician.

## McINTOSH IMPROVED SINUSOIDAL APPARATUS



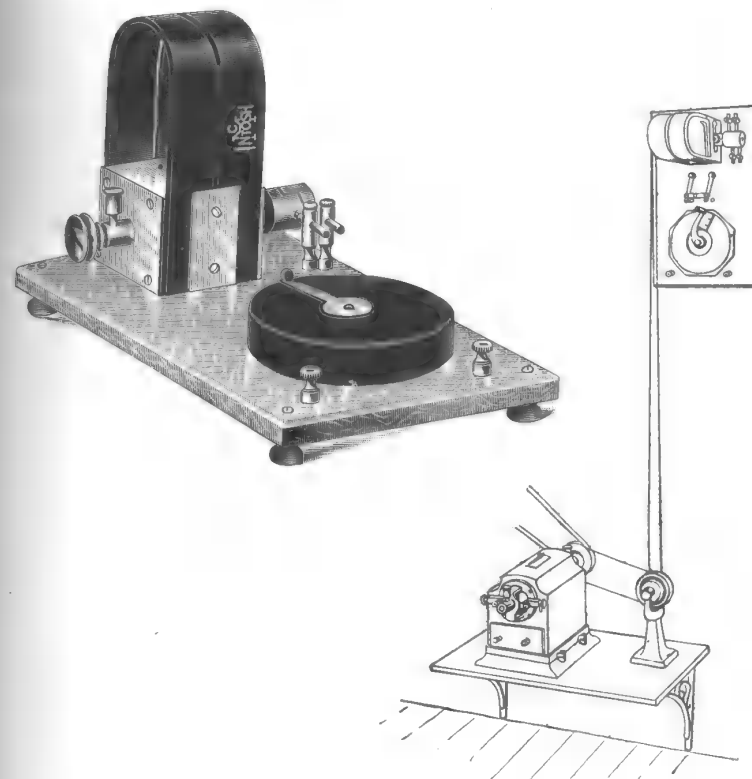
FOR USE WITH THE 110 VOLT DIRECT CURRENT

Price, including conducting cords, universal handles, sponge discs and attachment plug with cord. . . . . **\$50.00**

The instrument here illustrated is the result of the most recent attempt by manufacturers to provide a source of sinusoidal current for therapeutic work. It consists of a small motor wound for the 110 volt direct current, and has connected with it a special rheostat for controlling its speed. The shaft of the motor is extended and carries on this extension the armature of the sinusoidal machine, thus making a very convenient and compact arrangement, doing away with belts and pulleys. The armature carrying the windings of the coils of wire in which the induced sinusoidal currents are generated revolves between the poles of a group of two powerful permanent magnets, the pole pieces of which are so shaped as to secure a uniform gradation in the lines of force which cut across the revolving coils on the armature. From the coils the current is conveyed to binding posts on the base of the instrument, but before the circuit reaches the binding posts a wire rheostat is interposed, regulating the strength of the current. This arrangement makes the apparatus complete. It is only necessary to connect the binding posts on the top of the motor with a suitable direct current circuit such as the Edison incandescent light circuit, or a street car or power dynamo circuit of higher voltage, provided sufficient lamp resistance introduced so as to reduce the potential, and then complete the patient's circuit by attaching electrodes to the binding posts on the base. **THE RAPIDITY OF ALTERNATIONS** is readily modified by the rheostat in the motor circuit while **THE STRENGTH OF CURRENT CAN BE GRADUATED INDEPENDENTLY BY MEANS OF THE RHEOSTAT IN THE PATIENT'S CIRCUIT.**

SHIPPING WEIGHT, 75 LBS.

## McINTOSH INDEPENDENT SINUSOIDAL APPARATUS



ARRANGED FOR USE WITH ANY FORM OF MOTOR

Price, complete, as shown in the large illustration on the left, including conducting cords, universal handles and sponge discs. . . . . **\$30.00**

Price, including countershaft and belting to connect with motor. . . **34.50**

We have had many inquiries for our Improved Sinusoidal Apparatus from parties who either were not supplied with the 110 volt direct current or who already possessed some form of motor, either alternating current or water motor, with which they desired to use the Sinusoidal Apparatus. The outline illustration on the right shows the Independent Sinusoidal Apparatus placed upon the wall and connected by means of countershaft and pulley with a motor which is supposed to be in use for operating a Static Machine.

SHIPPING WEIGHT, COMPLETE, 42 LBS.



## MECHANICAL VIBRATION

By J. H. CARPENTER, M.D.,

Professor Electro-Therapeutics, Chicago College of Medicine and Surgery; Director, Electro-Therapeutical Laboratory, Francis Willard Hospital; Member American Electro-Therapeutical Association Member A. L. G. Q.

There are many forms of vibration used therapeutically, and the results obtained depend upon the modality used. A great deal of the therapeutic value of electricity depends upon the extremely rapid vibration of the current with its stimulating effect upon metabolism.

Mechanical Vibration, while influencing the tissues at a much slower rate, can be used much stronger than it would be wise to use the electric current and yet not be disagreeable to the patient. Its action can also be more concentrated and its rate and force are readily adjusted to suit the particular case. While many conditions are readily influenced by a high rate of vibration, as in the use of high frequency currents, a larger percentage are influenced more readily by a much lower rate, as in Mechanical Vibration.

Most pathological conditions are characterized by more or less stasis. This may be in a joint, along the course of a peripheral nerve, or in some part of the spinal cord. If this stasis can be removed by stimulation of the nerves that control the circulation of the part and the lymphatics brought to an active condition, in other words, bringing good nutritive matter to the part and establishing proper drainage from it, the progress of the disease is soon checked. If you have not tried it, you will be surprised how readily this can be accomplished by an intelligent application of suitable Mechanical Vibration.

It is a good rule to apply vibration as near the nerve center as possible when treating a nerve, and more benefit will be attained by treating the spine than can be done in twice the time applied farther out on the course of a nerve. If you will look well to the spinal origin of the nerve to the part or to the spinal source of the sympathetics that control the part, much good can be accomplished. Often it is of value to treat other branches of nerves that supply organs that are disturbed; thus, in uterine disturbances you will find the nerves in the gluteal region very sensitive and good results can be reached by treating them; and by improving their tone the condition of the other branches will be made better and the organ they supply improved. That pains are often pronounced in other branches is shown by the pain frequently felt at the knee when the real trouble is in the hip; this same action is general all over the body, only less pronounced in some parts than in others, and it is a point worthy of study by those who would successfully treat with vibration.

A favorable point to treat spinal nerves is to treat the small posterior cutaneous nerves that are given off between each vertebra. Applied at this point it is easy to influence not only the motor and sensory nerves given off there, but the branches going to the sympathetics as well. In Mechanical Vibration we have a powerful means of influencing the nervous system. Its action can be made one of inhibition or one of stimulation, depending upon the force used and the length of the treatment. Stimulation is the result most often worked for and the one more easily obtained, and covers by far the larger field.

The results obtained by vibration will always be proportionate to the skill with which it is applied. I shall not attempt to cover the technique of its application in all cases, but will show one and in that way give a general outline for others, always keeping in mind what you are trying to do and how it should work. Given an inflamed knee to treat, a common mistake is to work directly over the inflamed part, but a little reasoning should show the error of so doing. The condition is one of stasis, and the first efforts should be to combat this, and should be directed to the lymphatics that drain the part and the nerves that control it. Beginning with the nerves as they are given off in the lumbar and sacral regions and again as they leave the deeper parts, following them to near the inflamed area, working more mildly near the knee, treat the lymphatics from knee to groin, see that all avenues of elimination are active and

it will seldom be necessary to touch the knee at all. However, if the case has progressed to a mild deposit, that may be influenced by a local application after inflammation has subsided.

Where superficial results on the cutaneous nerves only are desired, a friction stroke at a high speed will produce the result in the quickest time, but if the full therapeutic value of vibration is desired, it is necessary that an impulse be used which will affect the deeper nerves, as the spinal and the sympathetic plexus. This is readily accomplished by a percussion or hammer stroke, as this produces a wave line, which is in the right direction to insure the greatest penetration, without bruising the part. If this be attempted with a friction impulse, the only way penetration can be secured is by using sufficient force to bind the parts together, and bruising of the more superficial ones is sure to result. This will produce a counter irritation, but it is a mistake to call the results Vibratory Stimulation.

In treating cases, two conditions of the nervous system will be encountered. In some cases the nerve to a diseased part will be in a hyper-sensitive condition; these should receive light treatments. Others will show a lessened sensibility, ranging all the way to complete loss of function; these should have very vigorous treatment repeated at least once a day until function begins to return, when the intervals should be lengthened. In many of these cases the patient will sense new pains as the nerves return to their normal condition, and will sometimes think that they are being made worse by the treatments, when, in reality, they are improving. This should not deter the operator from proceeding.

### VIBRATION DON'TS

- Don't treat over an abscess—treat the lymphatics that drain the part.
- Don't treat over a pregnant uterus.
- Don't treat over the pneumogastric nerve without knowing the condition of the patient's heart.
- Don't treat soon after a full meal as the changed circulation will sometimes disturb digestion.
- Don't treat the spine with the patient in any but a recumbent position—in some cases a treatment over the splanchnic area will cause sufficient dilatation of the abdominal blood vessels to produce vertigo and alarm the patient. This is more apt to happen in those past middle life.
- Don't make the mistake of overtreating feeble patients or those suffering from toxemia, as the reaction is often great, sometimes sufficient to produce a raise in temperature owing to the extra amount of toxic material thrown upon the circulation. All organs of elimination should be stimulated and a light, short treatment given and not repeated too soon.
- Don't treat results and neglect the cause.
- Don't treat your cases in a hit-and-miss manner, you would not expect results from drugs used in that way.
- Don't expect a vibrator to think for you; this attachment has not been added as yet.
- Don't expect a vibrator to cure everything; much harm has been done to this method by the exaggerated claims of its would-be friends. It has its limitations the same as everything else and should be used with the same judgment.
- Don't expect a small hand machine to produce the same results as a larger and heavier machine. No intelligent person would expect that a six-inch induction coil would be capable of producing an X-Ray strong enough to penetrate the pelvis, yet this would be as reasonable as expecting that a small hand vibrator, with a  $\frac{1}{8}$ th horse power motor, would do the same class of work as a heavier machine with a motor eight times as strong. No power is generated except by the motor and the results are proportionate to the energy expended.

## McINTOSH-CARPENTER VIBRATOR



THE  
VIBRATOR  
THAT  
VIBRATES  
THE  
PATIENT,  
NOT THE  
OPERATOR

## OUTFIT No. 2 WITH STYLE "A" HAND PIECE

Price, arranged for 110 volt direct current.....	\$ 75.00
Price, arranged for 104-115 volt, 60 cycle alternating current.....	75.00
Price, arranged with direct current motor and rectifier to operate on 104-115 volt, 125 to 140 cycle alternating current.....	95.00

This apparatus offers a high degree of efficiency and constitutes a handsome embellishment to a physician's office. The cabinet-work is of selected, quarter sawed oak, hand-rubbed to a brilliant polish in the popular golden finish and is mounted on casters. The motor is enclosed in the cabinet, protected and concealed from the gaze of the curious. A complete set of six vibratodes is furnished with this elegant, up-to-date equipment.

SHIPPING WEIGHT, DIRECT OR 60 CYCLE ALTERNATING, 90 LBS.  
SHIPPING WEIGHT, 125-140 CYCLE ALTERNATING, 130 LBS.

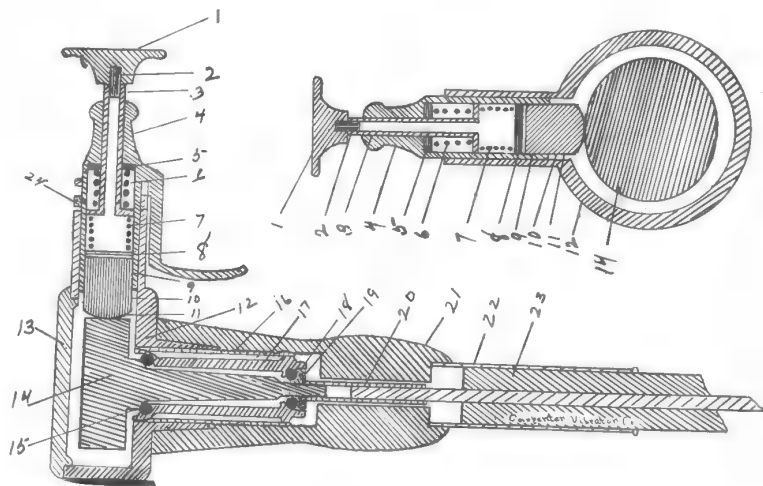
## TEN GOOD POINTS ABOUT THE McINTOSH-CARPENTER VIBRATOR

THE VIBRATOR THAT VIBRATES THE PATIENT,  
NOT THE OPERATOR

1. Affords the direct percussion or tapping stroke; entirely free from the superficial action of any gyratory effect and affording the deepest penetration possible.
2. A compressible spring takes up the recoil of the return stroke, relieving the operator entirely of vibration.
3. The double eccentric in the hand piece is evenly balanced and does away with the jarring effect produced by single eccentrics.
4. The double eccentric affords two strokes of vibration for every revolution of the motor, thus permitting of a high rate of vibration with an alternating current induction motor.
5. The length of the stroke can be regulated DURING TREATMENT by means of a trigger adjustment, making it unnecessary to stop the machine as with many of the set-screw adjustments.
6. The hand piece is provided with a set of ball-bearings on the main shaft; reducing friction to a minimum and allowing of continued use without heating.
7. The cabinet is supported on the stand by a ball-bearing, permitting it to turn freely as the flexible shaft is moved around, thus preventing the short curves and kinks which are so fatal to the life of flexible cables.
8. The motor is enclosed in a cabinet, out of the dust, where it is not liable to be tampered with, so that the patient does not see all there is to the outfit at the first glance.
9. The current is turned on and off automatically by means of the cut-out hook upon which the hand piece is hung, making it impossible to leave the machine with the current turned on.
10. The entire apparatus is of durable, substantial construction, and is guaranteed against any defect in material or workmanship. (Flexible shafts of stand machines are guaranteed for two years.)

## McINTOSH-CARPENTER VIBRATOR

THE VIBRATOR THAT VIBRATES THE PATIENT, NOT THE OPERATOR



DETAILED VIEW OF STYLE "A" HAND PIECE

Nos. 1 and 2 are parts of the flat vibratode. No. 3 shows the piston, which is threaded at the outer end to receive the vibratode and is flanged on the inner end to engage springs Nos. 6 and 7. No. 4 shows the bearings for springs, piston, etc., and is held in position by set screw No. 24. Spring No. 6, acting upon the flange of piston No. 3, causes its return after the impulse has been delivered. Spring No. 7 serves to cushion the impulse and regulate its length.

When pressure is brought upon the trigger part of No. 4 by the index finger, the length of the chamber containing the springs is reduced, and, as No. 6 is the stronger, No. 7 is the first to be condensed, acting as a solid part of the piston; and by varying the amount of the pressure the length and the force of the impulse is varied from a stroke suitable for use over the eye to an impulse that can be transmitted the entire length of the anatomy. If this hand piece had no other point of superiority, this alone would place it far ahead of others, as it enables the operator to give the proper strength of vibration to the particular part being treated without resorting to set screws, as in other machines; with many of which the length of stroke is never changed during treatment and all parts are treated alike without regard to their condition, some being undertreated and others overtreated; such treatment cannot bring the best results.

No. 10 is the plunger receiving the impulse from the double eccentric No. 14 and transmitting it through the regulating spring No. 7 to the piston No. 3. The eccentric No. 14 originates the impulse through the difference in its diameters, and, being a double eccentric, it is balanced in weight and does not transmit the hammering vibration to the operator, so common with most machines. By being double it imparts two impulses for each revolution of the motor shaft; giving proper speed from a self-starting alternating current induction motor without special speed devices which are apt to get out of order. Nos. 15, 16, 17, 18 and 19 are parts of the ball-bearing on the main shaft, which greatly reduces the friction at this point, giving smooth, easy running and great durability. This hand piece is usually run at 4,000 vibrations per minute, the impulse delivered being a tapping stroke which at this speed insures the greatest penetration without injury to the surface as the wave line is in the right direction to reach the deeper parts which is so necessary if the best results are to be obtained. This hand piece is durable, simple, easily adjusted and does not impart vibration to the arm of the operator.

## McINTOSH-CARPENTER VIBRATOR

THE VIBRATOR THAT VIBRATES THE PATIENT, NOT THE OPERATOR



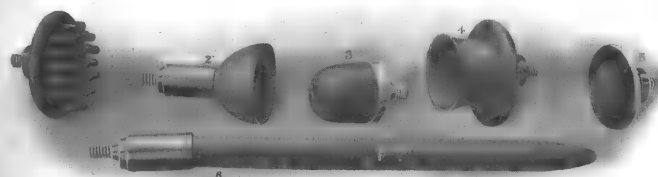
OUTFIT No. 5 WITH STYLE "A" HAND PIECE

Price .....\$40.00

This constitutes a complete vibratory outfit offering all of the advantages of our Style "A" Hand Piece at a much lower figure than the complete machine with stand. Any physician who has an electric, water or gasoline motor or  $\frac{1}{4}$  H. P. or more, available, can make use of this outfit, attaching by means of a belt, and disconnecting when it is desired to use the motor for some other purpose. The countershaft may be attached to the wall or to a table. A complete set of six vibratodes accompanies the outfit.

SHIPPING WEIGHT, 12 LBS.

## SET OF SIX VIBRATODES

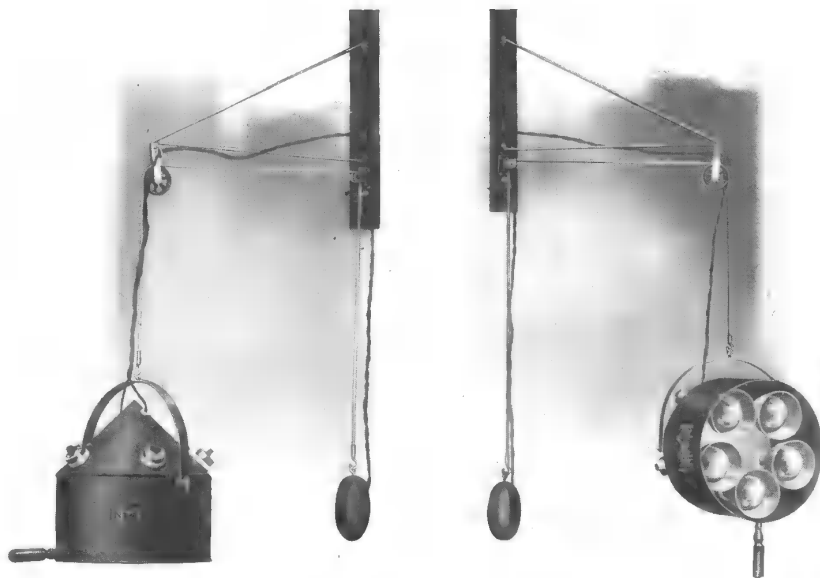


The above set of vibratodes is furnished with every No. 2 and No. 5 outfit.

Price	Postage
Price, No. 1 Soft Rubber Brush Vibratode.....	\$0.75 .03
Price, No. 2 Soft Rubber Eye Cup Vibratode.....	.75 .03
Price, No. 3 Soft Rubber Ball Vibratode.....	.75 .03
Price, No. 4 Soft Rubber Cup Vibratode.....	.75 .03
Price, No. 5 Flat Disc for General Application.....	.25 .03
Price, No. 6 Soft Rubber Rectal Vibratode.....	.75 .03

## McINTOSH STYLE "A" THERAPEUTIC LAMP

500 CANDLE POWER



Price ..... \$50.00

This apparatus affords an ideal method of utilizing light as a therapeutic agent. It contains five 100-candle power bulbs accurately focused together so that the light may all be concentrated at one spot; or a gentler, more diffused effect may be obtained by employing but two or three of the lamps. It is suspended from a swinging crane permitting of easy adjustment to any desired angle.

SHIPPING WEIGHT, 85 LBS.

## McINTOSH STYLE "A" THERAPEUTIC LAMP

500 CANDLE POWER

### THE SOURCE OF LIGHT

The light is obtained from five 100 candle power, condensed filament, incandescent bulbs, arranged in very compact form. The light rays afforded are of a rich, soft character; abounding in the violet or chemical rays which are so valuable for therapeutic purposes and free from excessive glare.

### REFLECTION

Each lamp is fitted into a highly polished aluminum reflector of suitable shape; the rays being collected and focused toward one central point and permitting of perfect concentration. Aluminum as a reflecting surface is far superior to either nickel or silver, as it retains its lustre much longer and always presents a clean, fresh appearance.

### REGULATION

A separate cutout switch connected with each of the five bulbs enables the operator to regulate the intensity of the light by the number of lamps employed; thus, if but 200 candle power is required, two bulbs may be used, making it unnecessary, as with some lamps, to burn the full 500 candle power, holding the lamp three or four feet away from the patient and consuming more current than is actually needed. This feature assures perfect control of light and economy of operating expense, and is worthy of careful consideration.

### MECHANICAL DETAILS

The construction and finish of the apparatus is strictly high grade, and the complete equipment makes a most desirable addition to the office of any physician. The hood in which the bulbs and reflectors are mounted is of finely finished Russian iron, which is proof against the heat to which it is exposed. This finish is far superior to the nicked finish in which so many outfits are furnished, as the latter becomes easily discolored by the heat. The hood is suspended from a swinging crane, mounted on a wall bracket, permitting of easy adjustment in any desired position.

### INSTALLATION

The apparatus consumes about 12 amperes of current and can be readily connected with any 110 volt electric lighting or power circuit—either direct or alternating. It is furnished complete with a cutout switch, so as to remove the entire apparatus from circuit when not in use.

### RENEWALS

This feature is one in which our apparatus possesses a great advantage over many others. The form of bulb used is of the condensed spiral filament, round type, familiarly known to the electrical trade as a "100 candle power Stereopticon lamp." The purchaser of a lamp is at perfect liberty to obtain renewals at any electrical supply store where such lamps can be had and is not under the disadvantage of being obliged to send a long distance, thus saving time and annoyance.

**McINTOSH STYLE "B" THERAPEUTIC LAMP**

50 CANDLE POWER

Price ..... **\$6.00**

The illustration shows a very convenient form of portable therapeutic lamp of most simple design but of very substantial construction; by far more durable than the flimsily constructed, low-priced lamps offered on the market.

The form of bulb supplied is of the round, 50-candle power, condensed filament style, known as the "Stereopticon type." It throws a strongly concentrated light, rich in both heat and chemical rays.

The socket is of porcelain and is much more substantial than the ordinary brass socket used; not to speak of its greater ability to withstand the heat.

The reflector is of highly polished aluminum; gathering and focusing the rays upon the desired spot and affording the full efficiency of the bulb. Our reflector will hold its lustre long after the cheap nickel plated hoods have become tarnished.

The handle is of hardwood, in neat natural finish, proof against the heat to which it is subjected. An attaching plug with a six-foot length of cord permits of instant connection with any ordinary lamp socket.

SHIPPING WEIGHT, 3 LBS.

**McINTOSH STYLE "C" DERMAL LAMP**

24 CANDLE POWER

Price ..... **\$5.00**

As its name indicates, this lamp is especially intended for application of light and heat to the skin. It is particularly useful with dermatologists and complexion specialists for the drying-in of cremes, lotions, etc., inducing a feeling of restfulness on the part of the patient.

The bulb is of 24-candle power, offering a proper amount of light and heat for the purpose. Being frosted it sheds a rich, soft light, most pleasant for use about the face and head.

The general construction of Style "C" Lamp is the same as that of Style "B," reflector, socket, etc., being similar, the only difference being in the bulb furnished.

SHIPPING WEIGHT, 2½ LBS.

**McINTOSH STYLE "D" DERMAL LAMP**

24 CANDLE POWER

Price ..... **\$6.00**

This consists of Style "C" Lamp, provided with two additional bulbs, one blue and one red, making an equipment especially popular with dermatologists.

The blue bulb is made use of for the calming, sedative properties of the blue rays, while the red bulb is employed for its stimulating effect.

SHIPPING WEIGHT, 3 LBS.

## McINTOSH CAUTERY CONVERTER



Price, including attachment plug with cord..... **\$25.00**

This appliance is intended for the purpose of converting an alternating current of 55, 110 or 220 volts pressure to a cautery current of suitable voltage and amperage; furnishing also a diagnostic lamp current of wide usefulness. The instrument is of the induction coil type, and is so constructed as to render the highest possible efficiency with a minimum of current consumption.

The cautery current is controlled by the right-hand switch lever, which affords perfect regulation of the quantity delivered, enabling the operation of small or large cautery knives with perfect ease.

The diagnostic lamp circuit is supplied from a separate winding, making it entirely independent of the cautery circuit; the strength of current being controlled by a perfectly graduated rheostat, permitting of the illumination of lamps of very small capacity or those of larger volume.

A very neat and altogether practical arrangement is provided for adapting the Converter to either 55, 110 or 220 volt alternating current; a movable set-screw forming a permanent switch for placing the various windings in circuit. The advantage of this method will be easily perceived, for, when the set-screw has once been set, say, for example, at "110," it becomes impossible to damage the instrument by accidentally sending the 110 volt current through the 55 volt winding.

Another unique feature is the cut-out switch, which is placed just between the supply binding posts, so as to turn off the current when through using the Converter; precluding the possibility of leaving the instrument with the current turned on.

The Converter is put up in a very finely finished case of enameled iron, the cover consisting of a plate of highly polished marble eight and one-half inches in diameter, upon which are mounted the various levers, binding posts and switches.

When ordering, please state style of lamp socket, whether Edison, Thompson-Houston or Westinghouse.

SHIPPING WEIGHT, 25 LBS.

## McINTOSH ALTERNATING CURRENT CAUTERY TRANSFORMER



Price, including attachment plug with cord..... **\$17.50**

This instrument is designed for the purpose of transforming an alternating current of 55 to 110 volts pressure to a current of suitable voltage and amperage for cautery work.

The instrument is so wound that the greatest possible economy is exercised regarding the amount of current consumed, in other words, the coils are so constructed that very little of the initial energy fed to the machine is dissipated in heat; by this method we secure the highest efficiency at the lowest cost.

The cautery current is controlled by the large switch lever, operating over the circle of buttons mounted on the marble top, assuring perfect control of the current supplied to the cautery knife.

A diagnostic lamp may also be used in connection with the Transformer, and the strength of current may be regulated by inserting the cord tips in the sockets in the buttons.

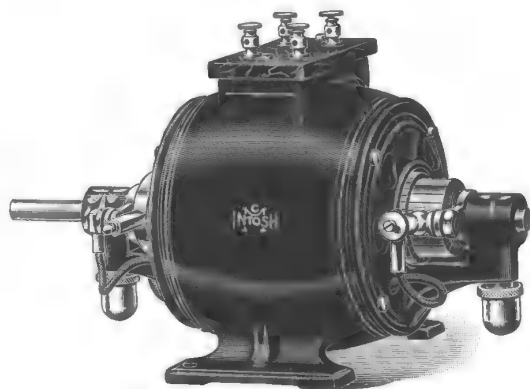
The Transformer is put up in a very handsome nickel plated jacket, the top and bottom consisting of two plates of highly polished marble seven and one-fourth inches square.

When ordering, please state style of lamp socket, whether Edison, Thompson-Houston or Westinghouse.

SHIPPING WEIGHT, 23 LBS.



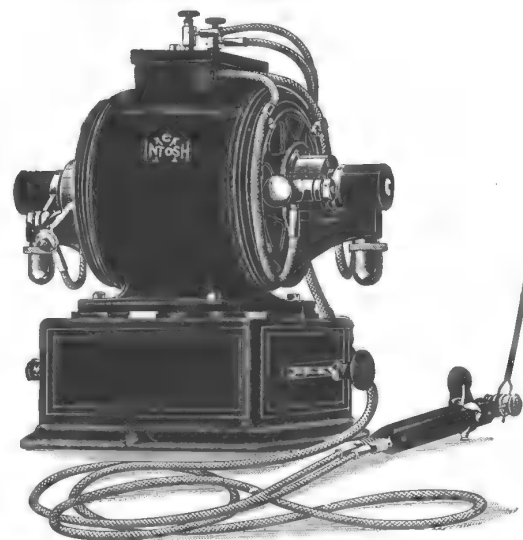
## McINTOSH MOTOR GENERATOR



		Shipping Weight
Price of $\frac{1}{8}$ H. P. for 110 or 220 volt current .....	<b>\$30.00</b>	40 lbs.
Price with controlling rheostat .....	<b>38.00</b>	55 lbs.
Price of $\frac{1}{4}$ H. P. for 110 volt current .....	<b>34.50</b>	40 lbs.
Price with controlling rheostat .....	<b>42.50</b>	55 lbs.
Price of $\frac{1}{2}$ H. P. for 220 volt current .....	<b>36.50</b>	40 lbs.
Price with controlling rheostat .....	<b>44.50</b>	55 lbs.
Price of $\frac{3}{4}$ H. P. for 110 volt current .....	<b>45.50</b>	60 lbs.
Price with controlling rheostat .....	<b>54.50</b>	75 lbs.
Price of $1\frac{1}{2}$ H. P. for 220 volt current .....	<b>48.00</b>	60 lbs.
Price with controlling rheostat .....	<b>57.00</b>	75 lbs.

The purpose of the Motor Generator is to change a 110 volt direct to a 70 volt alternating current, which may be utilized to supply a Cautery Transformer or Converter, or may be employed as a sinusoidal current in connection with a Wall Plate. This appliance is especially suitable to be used in connection with the No. 8 Wall Cabinet (p. 20) or the No. 10 Wall Cabinet (p. 22) in cases where it is desirable to operate these in connection with the 110 volt direct current—the Motor Generator supplying the needed alternating current for the cautery and sinusoidal circuits. The motive power derived can be utilized for any service in which such energy is adaptable; such as operating a Static Machine, Vibrator or Air Pump. The binding posts nearest the commutator are for connection with the direct current, while the posts adjacent to the collecting rings furnish alternating current. The rheostat quoted additional is not required unless the motor is to be employed for power purposes.

## McINTOSH DIRECT CURRENT CAUTERY TRANSFORMER



Price for 110 volt direct current .....	<b>\$35.00</b>
Price for 220 volt direct current .....	<b>38.00</b>
(Cautery cords and handle not included)	

We here illustrate a very satisfactory appliance for converting the direct current of 110 or 220 volts to a current of suitable voltage and amperage for cautery work.

By the use of this outfit the storage battery may be entirely dispensed with; where the direct current is available all that is necessary is to attach it to any electric light socket.

The current flow is perfectly controlled by means of the lever projecting from the base. Current suitable for operating diagnostic lamps is obtainable and under perfect control.

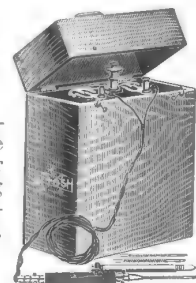
The apparatus is quiet in operation, artistic in design, finely finished and so substantially constructed that with ordinary care it will render years of service with practically no deterioration.

SHIPPING WEIGHT, 40 LBS.

## McINTOSH FLUID CAUTERY BATTERY

This is a most practical form of Fluid Cautery Battery. It contains two glass jars and two sets of large elements; generating a current of heavy volume for cautery work and lighting of lamps; the strength being regulated by the depth to which the elements are immersed. The solution is composed of Sulphuric Acid, Bichromate of Potash, Bisulphate of Mercury and water. The case measures 6x11x14 inches.

Price, including cautery cords, fibre handle, three cautery electrodes and diagnostic lamp... **\$18.00**



SHIPPING WEIGHT, 25 LBS.

## PERFECTION CAUTERY-ILLUMINATOR SET No. 6



Price ..... \$12.00      Postage 25c

This set comprises a list of attachments for electro-cautery and for lamp diagnosis; being especially suitable to be employed in connection with the McIntosh Cautery Transformer, the Cautery Converter or the No. 8, 9 or 10 Wall Cabinet; and makes a most valuable addition to the armamentarium of the physician possessing one of the above equipments.

### INCLUDES

1 Universal Metallic Cautery Handle, complete, with wheel, canula and snare.....	\$5.00
1 Pair Heavy Cautery Cords.....	1.25
3 Cautery Electrodes, assorted (to suit purchaser).....	2.25
1 No. 124 Universal Holder and Lamp, including set of 3 Speculums..	3.00
1 Pair Twisted Cords for Illuminator.....	.50

PUT UP IN A SUBSTANTIAL LEATHERETTE CASE

## FIBRE CAUTERY HANDLE



Price..... \$1.25      Postage 6c

The above handle is of black fibre. It is provided with an interrupting key and can be used with any of our Cautery Electrodes except the loop, which requires the ecraseur attachment.

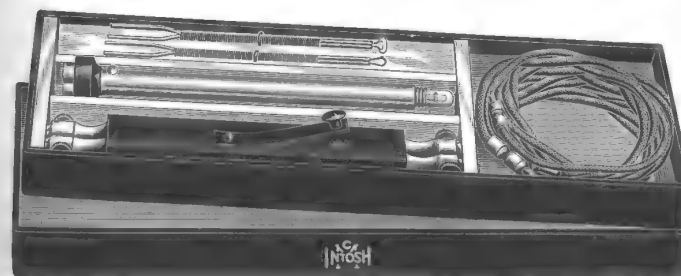
## CAUTERY CORDS



Price, per pair..... \$1.25      Postage 6c

The heavy amperage required in cautery work makes it necessary to use cords with large conducting surface. Ordinary conducting cords such as are used for galvanic and faradic currents, are inadequate to convey a cautery current. The above cautery cords are of very large conducting capacity and do not become heated when in use. They are insulated with neat, woven silk covering.

## CLIMAX CAUTERY-ILLUMINATOR SET, NO. 7

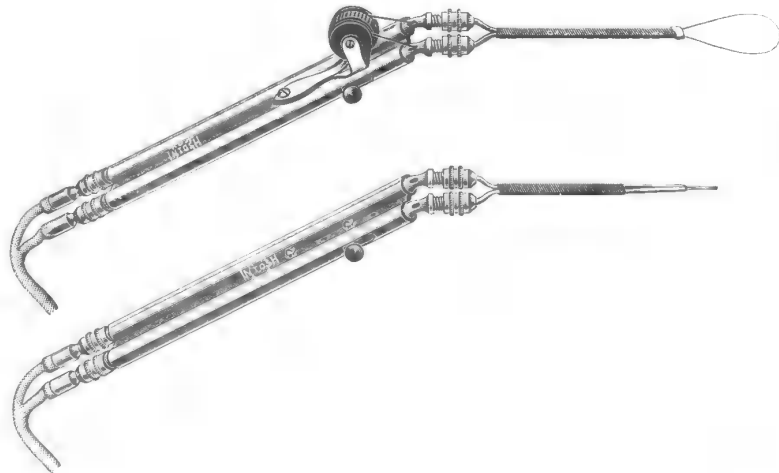


Price ..... \$5.00      Postage 15c

This list of instruments offers extremely good value at the price, and is a most desirable accessory to the McIntosh Cautery Transformer or to the No. 8 or No. 9 Wall Cabinet. It embraces the Fibre Cautery Handle, a pair Cautery Cords, two Cautery Electrodes and the No. 124 Holder and Lamp.

PUT UP IN A NEAT CLOTH-COVERED BOX

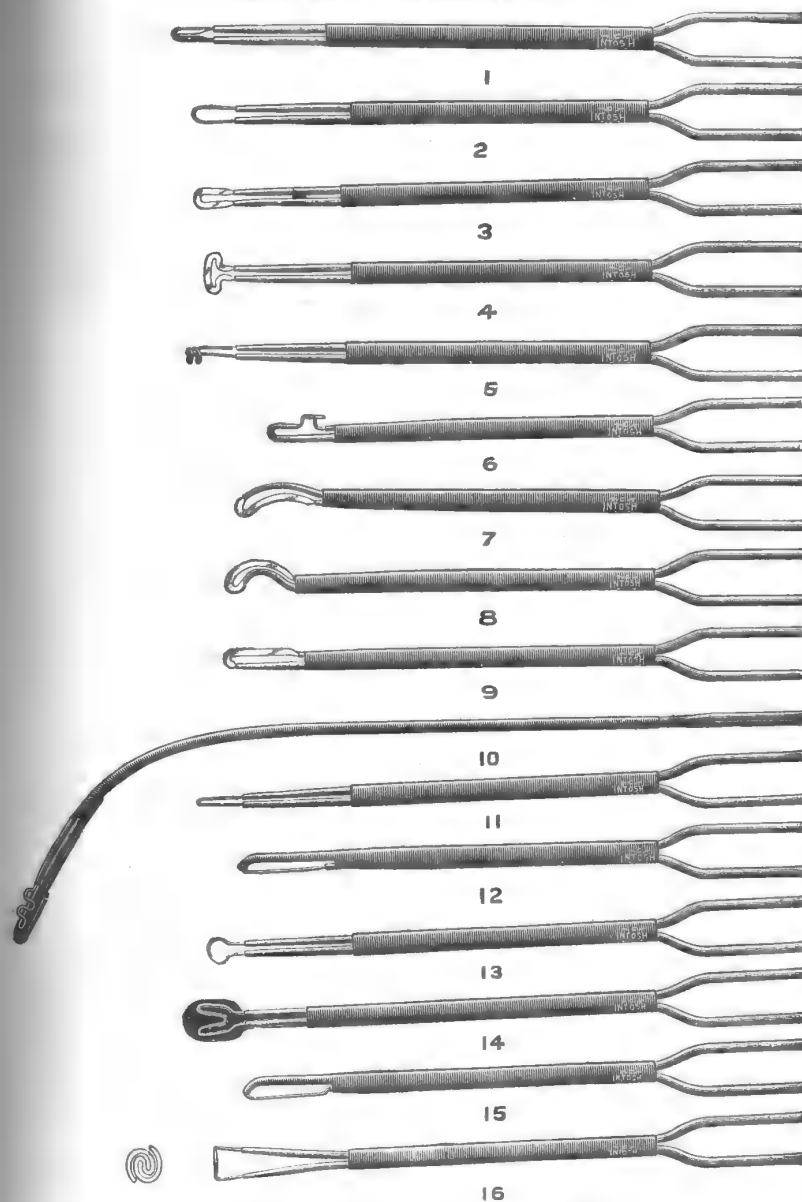
## UNIVERSAL METALLIC CAUTERY HANDLE



Price of above handle without wheel or ceraseur.....	\$2.50	Postage 7c
Price, complete, including wheel, canula and snare.....	5.00	8c

The earlier type of cautery handles consists of a pair of conductors surrounded by a hard rubber sheath or insulator. However, owing to the liability of hard rubber to soften under the influence of heat, when the handle becomes warm by conduction from the cautery knife, the screws would loosen and allow the contacts to get out of adjustment, and in some cases the handle would fall to pieces. For this reason we have discarded entirely the use of hard rubber in the cautery handles, and substitute either metal or fibre instead. The McIntosh Universal Handle represents our latest and most improved type. It consists of a pair of heavy copper conductors provided with an interrupting switch, and the whole sheathed by thin nickel plated tubing. The sheathing is insulated at the end by fibre bushing. The outer sheathing is prevented from getting hot while the knife is in use by the annular air space between the inner conductors and the outer sheathing. The handle is adapted for use either with ceraseur or without. The ends which hold the knife are bent at an angle of about thirty degrees, which peculiarly fits the handle for laryngeal work. The knife or canula is held in firm contact with the handle by split jawed chucks, it only being necessary to give their milled ends a slight turn in order to firmly lock the knife in its position. All contact screws, which are liable to become lost, are thus dispensed with. The same device is used for holding the cord tips in position at the other end of the handle.

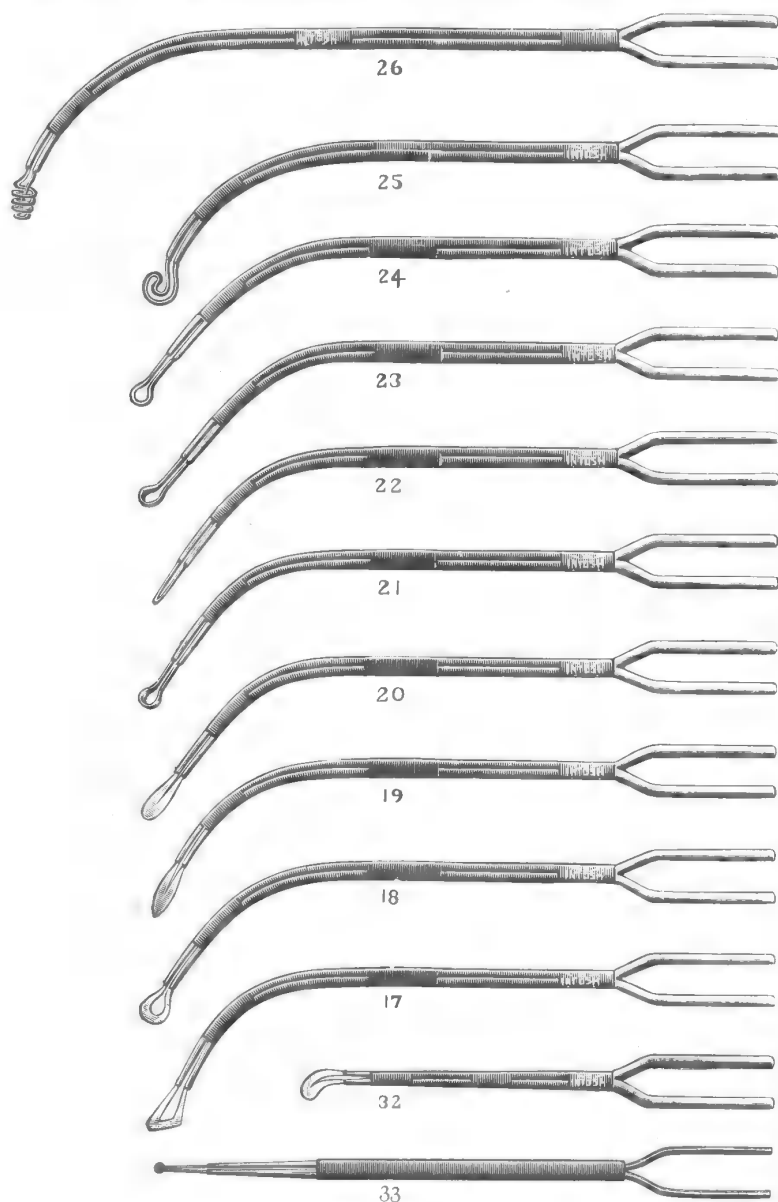
## CAUTERY ELECTRODES



Price of any of the above.....\$0.75  
Special forms of Cautery Electrodes made to order.

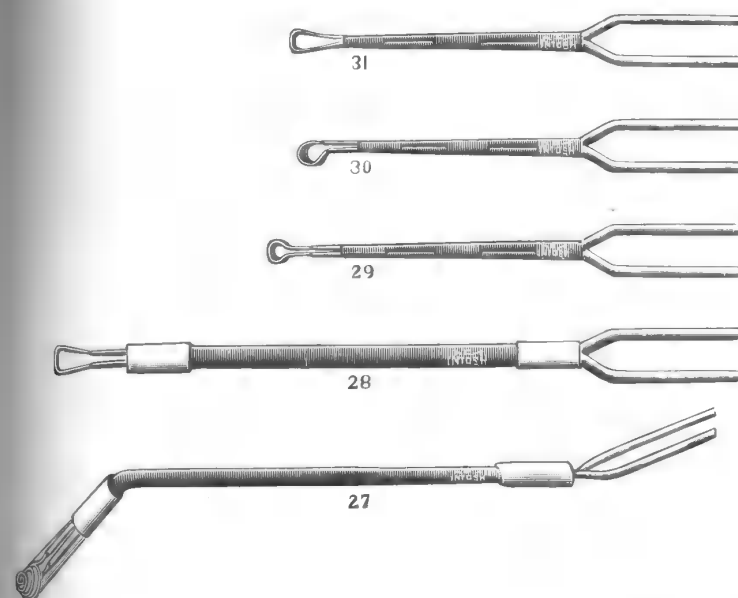
Postage  
2c

## CAUTERY ELECTRODES, LARYNGEAL CURVED



(See prices on next page)

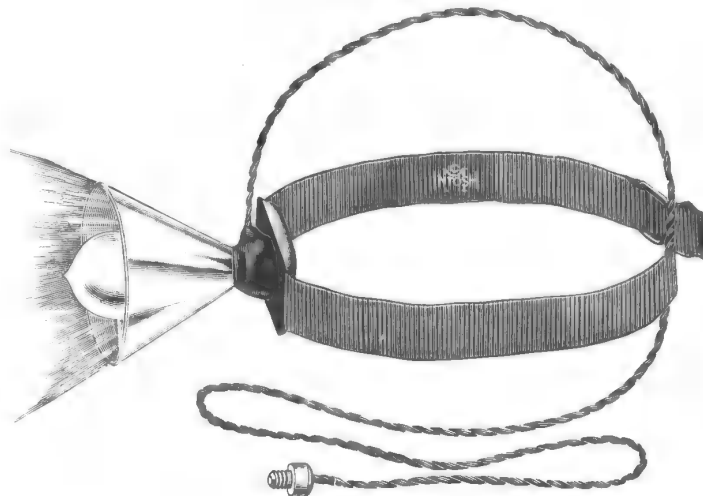
## CAUTERY ELECTRODES



	Price	Postage
17. Oblique Knife Electrode.....	\$0.75	2c
18. Knife Electrode, broad loop .....	.75	2c
19. Knife Electrode, lancet.....	.75	2c
20. Knife Electrode, flat .....	.75	2c
21. Curette Electrode, straight .....	.75	2c
22. Point Electrode .....	.75	2c
23. Curette Electrode, curved .....	.75	2c
24. Loop Electrode .....	.75	2c
25. Spiral Flat Electrode .....	.75	2c
26. Spiral Dome Electrode .....	.75	2c
27. Bosworth's Post-Nares Electrode, with shield.....	1.25	2c
28. Bosworth's Naso-Pharynx Electrode.....	.75	2c
29. Nasal, Curette Electrode, straight .....	.75	2c
30. Nasal, Curette Electrode, curved.....	.75	2c
31. Nasal, Square Knife Electrode, flat on top.....	.75	2c
32. Nasal, Knife Electrode, curved.....	.75	2c
33. Eye Electrode .....	.75	2c

**McINTOSH No. 136 HEAD LAMP**

FOR 110 VOLT CURRENT

COMBINES EFFICIENCY AND ELEGANCE WITH SIMPLICITY  
AND ECONOMY

Price..... **\$3.50** Postage **15c**

**WHY IT EXCELS**

Because it can be used on either direct or alternating current of 110 volts.

Because it can be instantly attached to any lamp socket.

Because it throws a strong, concentrated beam of light.

Because it is extremely light and can be worn continuously without discomfort.

Because it is very handsome in appearance, all metal parts being nickel plated.

Because of its simple construction.

Because no auxiliary device, such as controller, is necessary.

**LAST BUT NOT LEAST**

Because of its Popular Price.

When ordering state style of lamp socket, whether Edison, Thompson-Houston, or Westinghouse.

**HEAD LAMP FOR 220 VOLT CURRENT**

The No. 136 Head Lamp can be furnished with a special resistance lamp and attachment plug, permitting of its employment on circuits of 220 volts pressure.

Price, arranged for 220 volt current..... **\$5.00** Postage **25c**

**McINTOSH No. 137 ILLUMINATING OUTFIT**

Price (put up in a neat cloth covered box)..... **\$4.50** Postage **25c**

This is a very convenient Physician's Diagnostic Lamp set for use with either direct or alternating current of 110 volts. The salient feature of its construction, and the one which makes it unique, is that the two lamps are exactly adapted to burn in series. The lamps are carefully tested and selected in our laboratory, and are made to conform to a given standard as to current capacity.

The great advantage of its being adaptable to the lighting current without a controlling device as well as the facility with which the small lamp can be unscrewed and replaced when necessary, makes this arrangement desirable above all others.

The outfit comprises the following articles:

Series Current Tap with Frosted Resistance Lamp, One Pair Twisted Illuminator Cords, No. 124 Universal Holder and Lamp, Laryngoscope Mirror and Holder, Tongue Depressor and Shield for vaginal or rectal examination.

When ordering, state style of lamp socket, whether Edison, Thompson-Houston or Westinghouse.

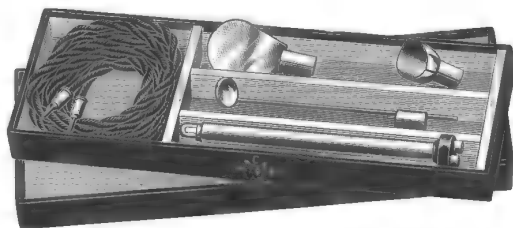
## McINTOSH No. 124 UNIVERSAL HOLDER AND LAMP



Price..... \$1.50      Postage 5c

The miniature lamp supplied with the above is designed for a pressure of six volts and has a capacity of .18 ampere or 180 milliamperes. It may, therefore, be connected directly with four dry cells or can be illuminated by the current from any of our wall plates or portable batteries by selecting the necessary number of cells or observing the amount of milliamperage flowing through the circuit. The holder can be connected with the conducting cords of any battery or wall plate.

## McINTOSH NO. 125 ILLUMINATOR CASE



Price..... \$3.75      Postage 15c

This Illuminator Case commends itself as indispensable to the practitioner.

It contains the following articles, put up in a neat leatherette case:

McIntosh No. 124 Universal Holder and Lamp.

Laryngoscope Mirror and Holder.

Tongue Depressor and Shield.

Shield for use in rectal or vaginal examination.

One Pair Twisted Illuminator Cords.

## McINTOSH No. 144 BATTERY HEAD LAMP



Price..... \$3.50      Postage 12c

This appliance is of similar construction to the No. 136 Head Lamp illustrated on another page, differing only in regard to the form of lamp supplied and the connecting terminals.

The special type of lamp furnished is of exceptionally high efficiency and has a brilliancy of about two candle power. It is adapted to a pressure of about six volts, and therefore should be illuminated in connection with four dry cells of standard type, preferably the No. 6 Columbia, connected in series. It consumes about one ampere of current, and consequently is best operated in direct connection with the cells; that is, without the intervention of a rheostat or switchboard.

The operator desiring to avail himself of the full capabilities of this instrument should provide four dry cells for the special purpose of energizing this lamp.

The diagnostician making any very considerable use of an appliance of this nature will find that a much more powerful light may be obtained by connecting an extra set of four cells in parallel with the first set, thus placing a very large amperage at the disposal of the lamp; this will also prove a measure of direct economy when in constant use.

## McINTOSH "LAMP DIAGNOSIS" EQUIPMENT



Price, complete, as illustrated..... **\$40.00**

The battery contains 4 No. 6 Columbia Dry Cells, connected with a rheostat of German Silver wire which affords perfect control of the current with even the most delicate lamp. The outfit includes a most complete assortment of electrically lighted instruments adaptable in almost any conceivable case in which diagnosis is to be made. The list is as follows:

- One Tongue Depressor with Illuminator.
- One Illuminative Auriscope with three specula.
- One Laryngoscope Illuminator.
- One General Diagnostic Illuminator.
- Two Urethroscopes, different size.
- One Light Carrier for Urethroscopes.
- One Illuminative Rectal Tube.
- One Light Carrier for Rectal Tube.

The instruments are securely held in place by nickel plated clamps mounted on the battery base. The case is covered with black morocco and is trimmed with artistic nickel plated hardware.

SHIPPING WEIGHT, 20 LBS.

## McINTOSH DIAGNOSTIC OUTFIT



Price, complete, as illustrated..... **\$33.00**

The battery and case illustrated are the same as shown on opposite page. The outfit includes a complete set of diagnostic instruments for general work as follows:

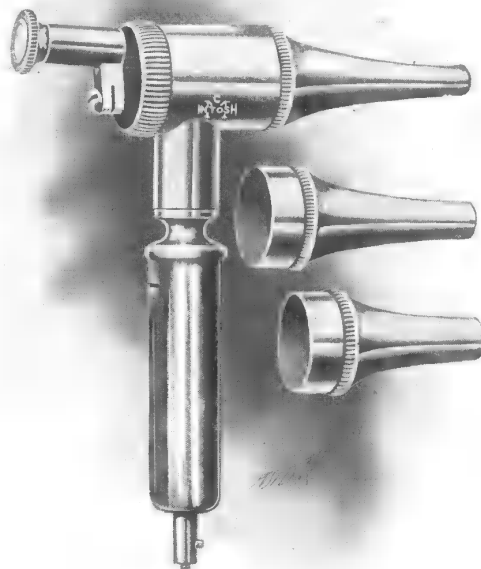
- One Tongue Depressor with Illuminator.
- One Illuminative Auriscope with three specula.
- One Laryngoscopic Illuminator.
- One General Diagnostic Illuminator.
- Two Urethroscopes, different sizes.
- One Light Carrier for Urethroscopes.

The instruments are securely held in place by nickel plated clamps mounted on the battery base. The case is covered with black morocco and is trimmed with artistic nickel plated hardware.

SHIPPING WEIGHT, 20 LBS.



## McINTOSH AURISCOPE

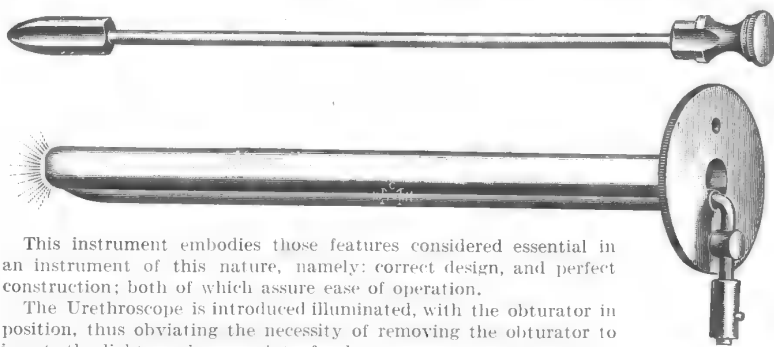


The small lamp contained in this instrument gives the operator a full view of the interior passages of the ear. It is also possible to make applications of medicaments or manipulate probes or forceps without interfering with either lamp or vision.

The lens is adjustable, and may be moved to one side, thus affording a direct view. The lamp bulb is made with a bullseye lens on the end, thus doing away with the metal reflector usually used.

Postage  
Price, complete, as  
illustrated. **\$6.25 6c**

## McINTOSH URETHROSCOPE, STYLE "A"

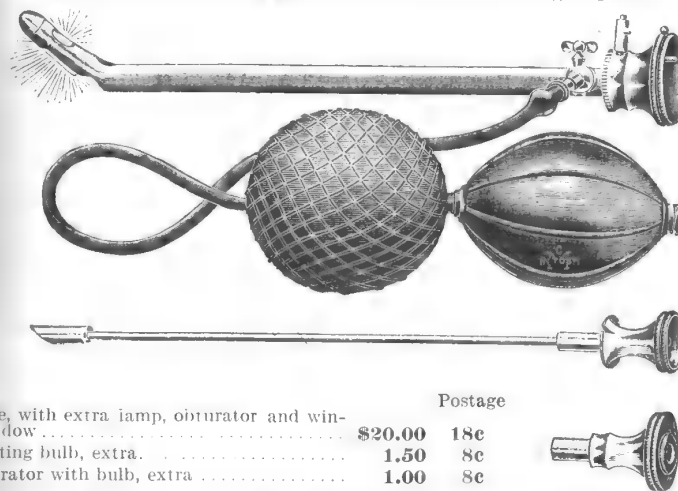


This instrument embodies those features considered essential in an instrument of this nature, namely: correct design, and perfect construction; both of which assure ease of operation.

The Urethroscope is introduced illuminated, with the obturator in position, thus obviating the necessity of removing the obturator to insert the light carrier, a point of advantage over instruments in which the light carrier lies loosely in the main tube.

Price, size 24 French, 15 cm. in length. **\$6.00 5c**

## McINTOSH DIAGNOSTIC CYSTOSCOPE

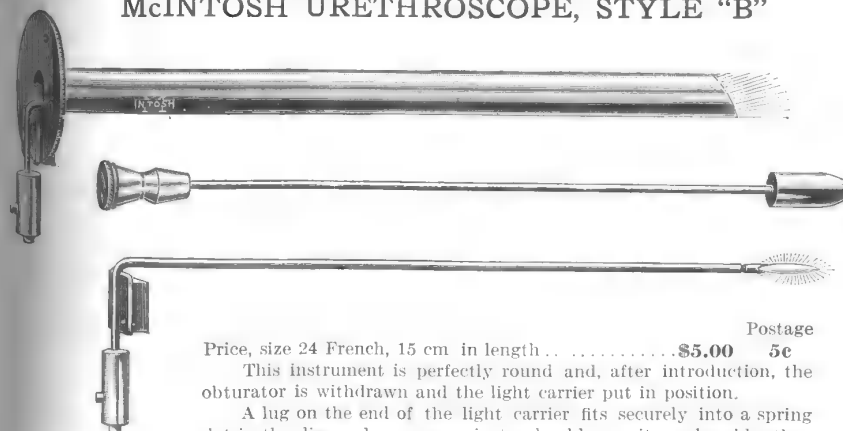


Price, with extra lamp, obturator and window	<b>\$20.00</b>	<b>18c</b>
Dilating bulb, extra	<b>1.50</b>	<b>8c</b>
Aspirator with bulb, extra	<b>1.00</b>	<b>8c</b>

This Cystoscope is unsurpassed for either diagnostic or therapeutic purposes. The instrument is so arranged that either air or water may be used as a dilating medium. At the curve of the beak, on the convex side, the tube is cut away at an angle of sixty degrees, leaving an opening equal to its entire calibre. This necessitates the use of an obturator for introduction, which closes the opening with smooth and perfect fit and allows the instrument to be introduced with as great facility as can any metal catheter or sound.

This Cystoscope is designed both for diagnostic purposes and for the removal of calculi and other foreign substances from the bladder, etc. Some of its advantages are that applications may be made directly to the diseased tissues, and that the bladder may be inflated with either air or water.

## McINTOSH URETHROSCOPE, STYLE "B"



Price, size 24 French, 15 cm. in length. **\$5.00 5c**

This instrument is perfectly round and, after introduction, the obturator is withdrawn and the light carrier put in position.

A lug on the end of the light carrier fits securely into a spring slot in the disc and presses against a shoulder on its under side, thus fixing the light carrier firmly to the under side of the tube and preventing it from crossing the field of vision.

## McINTOSH ANTRUM ILLUMINATOR



Price.....\$3.25 Postage 6c

This instrument, when put into the mouth of a patient with a normal antrum, shows such a brilliant light spot under each eye, such a red reflex from the pupil, and the patient gets such a brilliant subjective sensation of light, that there can be no doubt about the diagnosis.

The bulb is flat, about six millimeters thick and about fifteen millimeters in diameter, its shape permitting it to lie close to the hard palate so that the full benefit of the light rays is obtained. Always use this instrument in a darkened room. Length of instrument, 16 cm.

## McINTOSH FRONTAL SINUS ILLUMINATOR



Price.....\$3.25 Postage 7c

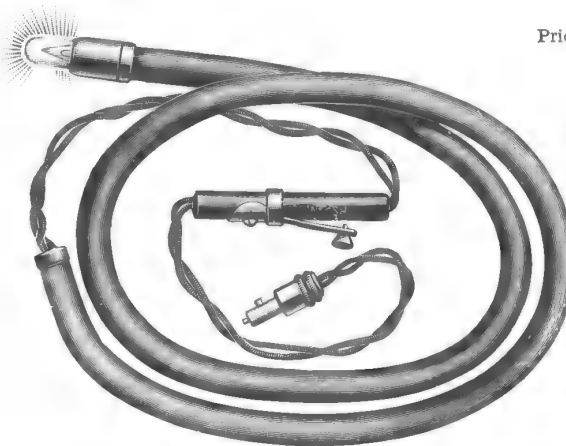
This instrument, when pressed against the inner orbit just below the superciliary ridge, illuminates the sinus so satisfactorily as to be indispensable for accurate diagnosis.

The lamp used has a condenser blown on the end of the bulb, and by the aid of the rubber shield which slides over it, sidelights are shut off, and the concentrated rays from the condenser are available entire, for trans-illumination, thus increasing its penetrating power.

The instrument with shield in position is about ten centimeters long and one and one-half centimeters in diameter.

To secure best results with this and all instruments for trans-illumination, use in a darkened room.

## McINTOSH "MAX EINHORN" GASTRODIAPHANE



Price.....\$7.75 Postage 16c

This instrument, designed by Dr. Max Einhorn, is intended for the trans-illumination of the stomach, and, like other trans-illuminating instruments, should be used in a darkened room.

The lamp is protected by a flint glass capsule, firmly cemented in a metal base, all joints being made perfectly smooth.

The rubber tubing is about twenty-six inches long, and has a wall about one-sixteenth of an inch thick, which, with the enclosed conducting cords, makes it

sufficiently rigid for easy introduction. The conducting cords extend about two feet beyond the upper end of the rubber tubing and have a cut-off attachment.

## McINTOSH SOCKET CURRENT CONTROLLER

This is a very convenient instrument, so small that it is easily carried in the pocket, yet doing all the work ordinarily required of such an appliance, i. e., reduction of the street current to such degree as to permit of the lighting

of diagnostic lamps, from either direct or alternating current of any voltage. In addition to this, used in connection with the direct current, *but not with alternating*, the socket current controller will furnish a current suitable for electrolysis, cataphoresis, and light galvanic treatment. On the alternating current a perfectly graduated sinusoidal current can be obtained.

This instrument, although especially constructed for operating electrically lighted instruments on the commercial current, can also be used to advantage for controlling faradic coils, small motors, etc.

Being made in twelve separate coils of silk covered German silver wire, with special attention to careful insulation, there is practically no possibility of short circuiting. The graduating contact spring is so arranged that almost imperceptible gradations of current can be obtained.

The controller is six and one-half inches long, one and one-half inches in diameter, and weighs ten ounces.

When ordering, please state voltage and style of lamp socket, whether Edison, Thompson-Houston or Westinghouse.



Price, including resistance lamp and conducting cords...\$10.00

Postage 29c

## McINTOSH No. 130 ELECTRO EYE MAGNET

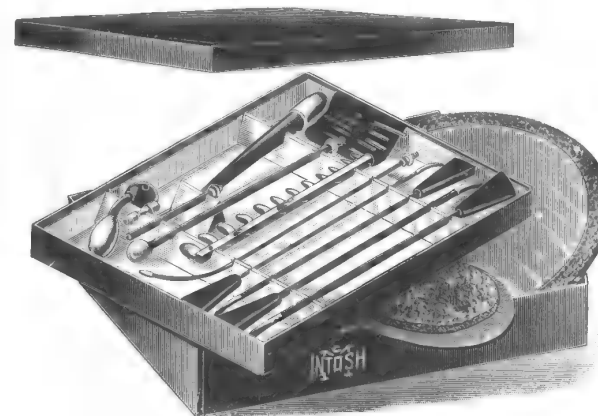


Price, complete, with extra stylet and cords, in plush-lined case .....	\$4.00	12c
Price, with No 1 Grenet Cell .....	5.75	60c
Price, including Series Current Tap .....	5.00	17c

This instrument is for removing bits of iron or steel from the cornea and chambers of the eye. Every surgeon and oculist knows from experience how difficult it is to remove particles of iron or steel filings and turnings from the cornea, even after they have been loosened, and the impossibility of extracting them from the posterior chamber of an eye with ordinary instruments. With the aid of this instrument these operations are easy and simple. To use the magnet the conducting cords are connected with the poles of a battery cell (a cell with zinc-carbon element is the best) and the small stylet brought near or in contact with the particle, which adheres to the magnet and is removed. If the particle of iron is imbedded in the cornea, it may be necessary to loosen it and then remove it with the magnet, which can be done without contact with the eye. If iron or steel has penetrated either chamber, it is then necessary to introduce the small stylet of the magnet, which attracts the particle, which is easily removed. The connections are made so that it can be connected to the cell of any Faradic Battery, but its magnetic force is greatly increased by adding several cells. The magnet may be operated with a lamp in series on the 110 volt DIRECT current.

When connected with one cell the magnet will lift 300 grains; by adding six cells, 720 grains.

## PRACTITIONER'S ELECTRODE SET, No. 3



Price .....	\$10.00
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A selection of our most popular and useful electrodes, embracing those best suited to the requirements of general practice. To further emphasize the adaptability of this set we might add that it has been endorsed by Dr. C. S. Neiswanger of Chicago, the well known electro-therapist.

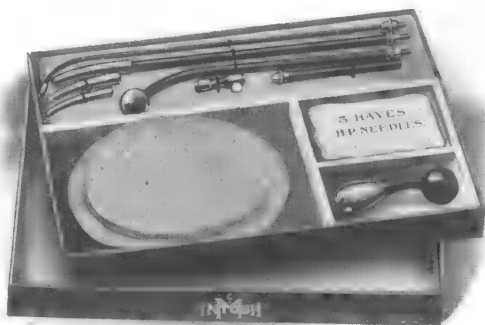
EVERY ARTICLE IN THIS SET IS A "LIVE ONE"

## CONTAINS

1 No. 116 Goldspohn's Copper Ball Vaginal Electrode .....	\$0.75
1 No. 21 Hard Rubber Insulated Urethral Electrode .....	.50
1 No. 70 Set (12) Assorted Olives for above .....	1.50
1 No. 53A Copper Rectal Electrode .....	1.00
1 Set (4) No. 119 Goldspohn's Copper Intra-Uterine Electrodes .....	3.00
1 No. 68 Insulated Curved Vaginal Electrode .....	1.25
1 No. 66 Hayes' Spongio Pile Abdominal Electrode .....	1.25
1 No. 3 Hand Spongio Electrode .....	.50
1 No. 107 Hard Rubber Needle Holder .....	.75
6 Hayes' Bulbous Pointed Steel Needles .....	.60
1 "E" Universal Electrode Connector .....	.10

PUT UP IN A NEAT LEATHERETTE CASE  
SHIPPING WEIGHT, 3½ LBS.

## IDEAL ELECTRODE SET, No. 4



Price ..... \$5.00

This assortment embraces a comprehensive list of electrodes including those most frequently required by the general practitioner, comprising those offering especially good value; these instruments are particularly suitable for applying the galvanic, faradic and sinusoidal currents and may be used with any of our wall plates or portable batteries.

## EMBRACING

1 Set No. 115 (3) Goelet's Dilating Electrodes, copper, with stem.....	\$1.50
1 No. 116 Goldspohn's Copper Ball Vaginal Electrode .....	.75
1 No. 53A Copper Rectal Electrode .....	1.00
1 No. 21 Hard Rubber Insulated Urethral Electrode .....	.50
1 No. 107 Hard Rubber Needle Holder .....	.75
3 Hayes' Bulbous Pointed Steel Needles .....	.30
1 No. 3 Spongio Pad Electrode .....	.50
1 "E" Universal Electrode Connector .....	.10

ENCASED IN A SUBSTANTIAL LEATHERETTE BOX  
SHIPPING WEIGHT, 2 LBS.

## THERAPEUTIST'S ASSORTMENT, No. 5



Price ..... \$15.00

This assortment of electrodes has been made up especially for the physician who contemplates making quite a specialty of Electro-Therapeutical practice, as it embraces a very complete set of instruments, covering almost every variety of application. The physician purchasing a Wall Cabinet cannot very well afford to be without a complete set of instruments such as this, which really opens up the full capabilities of the apparatus itself.

## COMPRISES

1 No. 14 Insulated Tongue Plate, copper .....	\$0.50
1 No. 37 Small Spatula-shaped Eye Electrode, copper.....	.50
1 No. 64 Nasal Electrode, copper .....	.75
1 No. 106 Casselberry's Bipolar Needle Electrode.....	1.00
1 No. 87 Interrupting Handle .....	.50
1 No. 33 Disc, medium .....	.20
1 No. 116 Goldspohn's Copper Ball Vaginal Electrode.....	.75
1 No. 53A Copper Rectal Electrode .....	1.00
1 Set (4) No. 119 Goldspohn's Copper Intra-uterine Electrode ....	3.00
1 No. 21 Hard Rubber Insulated Urethral Electrode.....	.50
1 Set No. 70 (12) Assorted Olives for above .....	1.50
1 No. 66 Hayes' Abdominal Electrode.....	1.25
1 No. 107A Needle Holder with magnifying glass.....	1.50
6 Hayes' Bulbous Pointed Steel Needles .....	.60
1 No. 35 Hair Brush Electrode .....	.75
1 No. 11 Massage Roller .....	1.00
1 No. 3 Hand Spongio Electrode.....	.50
1 "E" Universal Electrode Connector.....	.10

CONTAINED IN A NEAT LEATHERETTE CASE  
SHIPPING WEIGHT, 4½ LBS.

## THE SELECTION OF ELECTRODES

The physician entering the field of electro-therapeutics finds the selection of suitable electrodes a rather perplexing problem, especially as some writers recommend the use of some favorite metal in almost every conceivable application. Neiswanger is partial to copper, Massey holds fast to zinc, and Martin is a strong advocate of platinum. The matter really resolves itself to the question, "Shall the particular electrode be soluble or insoluble;" in other words, shall it be immune or subject to the electrolytic decomposition which takes place at the positive pole.

THE POSITIVE POLE of the galvanic current liberates and attracts the atoms of oxygen and chlorine found in the fluids of the body which attack the metal composing the electrode; and if it be one of the baser metals, such as copper, zinc, or iron, a salt is readily formed; this constituting the oxychloride of the respective metal.

THE NEGATIVE POLE gives rise to no such decomposition as takes place at the positive and therefore the metal used is not an important factor; although nickel plated instruments are usually utilized for special applications with this pole, because they do not tarnish or rust.

THE FARADIC CURRENT has no chemical properties and the metal utilized is not an essential item, although nickel plating is preferred.

THE SINUSOIDAL CURRENT lays no claim to any special polar effects and accommodates itself to the form of electrode most readily available.

COPPER, ZINC AND IRON are used largely for their antiseptic and astringent properties and the former is in popular favor at the present day. A copper electrode is valuable for metallic electrolysis at the positive pole and is useful on the negative pole or with the faradic current.

NICKEL PLATED ELECTRODES are designed especially for use with the faradic current or the negative pole in galvanism, and should on no account be employed on the positive pole, as the plating would be stripped; this also applies to gold plated needles, for, it will be recollected, gold is subject to the influence of chlorine.

BLOCK-TIN, PLATINUM AND CARBON are capable of withstanding the action of the positive pole, being unaffected by either chlorine or oxygen; and therefore may be utilized where the effects of this pole are desired in cases where the application of metallic salts is not indicated. Platinum is very costly and carbon is brittle and hard to work, but block-tin is more practical, as the cost is not prohibitive and it is easy of adaptation.

VAGINAL AND INTRA-UTERINE ELECTRODES are always best of copper, except for faradization or dilating, when nickel plating is preferable.

RECTAL ELECTRODES are usually more desirable in copper, as the treatment of hemorrhoids demands this particular metallic salt.

ABDOMINAL ELECTRODES are preferably composed of a block-tin plate with a suitable covering.

URETHRAL ELECTRODES, if required solely for the treatment of stricture, should be nickel plated, but for the treatment of gleet and kindred ailments copper is indicated.

EYE, EAR, NOSE AND THROAT ELECTRODES are largely called for in copper, but in cases where the faradic or sinusoidal currents are to be employed, nickel plating is more desirable.

EPILATING ELECTRODES OR NEEDLES are usually of steel, as the negative pole is most commonly employed for this purpose.

AS A SUMMARY it might be said that copper is a very serviceable, all-round metal, and can occasionally be replaced by zinc or iron; but nickel plated instruments are in a class of their own, and are unexcelled for certain special applications.

## INDEX TO ELECTRODE NUMBERS

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1	Universal Handle.....77	86	Goelet's Vaginal Electrode.....85
2	Dr. Hubbell's Aseptic Disc.....78	87	Handle with Interrupter.....77
3	Hand Spongio Electrode.....77	89	Stomach Electrode.....84
4	Dr. Hubbell's Aseptic Pad.....78	91	Fitz Hugh's Electrode.....86
6, 7	Rectal Electrodes.....88	92	Multiple Needle Holder.....92
9	Vaginal Electrode.....85	93	Apostoli Bi-Polar Electrode.....86
11	Massage Roller.....95	95	Dr. Neiswanger's Vaginal.....85
12	Comedone Extractor.....97	96	Dispersive Electrode.....79
13	Tonsil Electrode.....83	98	Dr. Martin's Block Tin.....87
14	Tongue Plate.....81	99	Dr. Neiswanger's Intra-Uterine.....87
16	Uterine Cup Electrode.....86	100	Dr. Neiswanger's Cataphoric.....91
17	Metallic Brush.....81	101	Dr. Martin's Copper.....86
20, 21	Urethral Electrodes.....90	102	Erb's Electrode.....81
25	Laryngeal Electrode.....83	104,	104-B Staff and Olives.....86
26	Duchenne's Points.....81	106	Dr. Casselberry's Needle Holder.....92
28	Laryngeal Electrode.....83	107,	107-A Needle Holders.....93
29	Dental Forceps Connector.....76	108	Needle Disc.....92
30,	30-A Wrist and Neck Electrodes.....79	109	Dr. Neiswanger's Varicocele.....91
31	Ear Electrode.....82	112	Dr. Turck's Gyromele.....84
32	Ball Electrode.....81	113	Dr. McBride's Cataphoric.....83
33	Disc Electrodes.....81	114	Magnifying Glass.....94
34	Eye Cup Electrode.....82	115	Dr. Goelet's Dilating.....87
35	Hair Brush Electrode.....96	116	Dr. Goldspohn's Vaginal.....85
37	Small Eye Electrode.....82	119	Dr. Goldspohn's Intra-Uterine.....87
40	Metal Handles.....77	124	Universal Holder and Lamp.....62
47	Gold-plated Needles.....92	125	Illuminator Case.....62
48	Double Ear Electrode.....82	126	Bowen's Prostatic Electrode.....89
50	Metallic Sound.....90	128	Bi-Polar Massage Roller.....95
52	Metallic Foot Plate.....78	130	Electro Eye Magnet.....70
53-A	Rectal Electrode.....88	131	Johnson's Hydro-Electric.....89
55	Esophageal Electrode.....84	132	Newman's Curved Urethral.....91
59	McLean Universal Electrode.....80	133	Neiswanger's Magnifying Glass.....94
60,	61 Needle Holders.....93	136	Head Lamp.....60
63	Dr. Rice's Rectal Electrode.....89	137	Illuminating Outfit.....61
64,	65 Dr. Sharp's Nasal.....83	138	Body Massage Roller.....95
66	Dr. Hayes' Abdominal Electrode.....79	139	Vacuum Cup Massage Electrode.....97
67	Dr. Patterson's Hollow Rectal.....88	141	Sanitary Hair Brush.....96
68	Curved Vaginal Electrode.....85	142	Carbon Cylinder Electrode.....96
70,	70-A Assorted Olives.....90	143	Copper Fistula Electrode.....89
72	Depilatory Forceps.....93	144	Battery Head Lamp.....63
74	Double Eye Electrode.....82	145	Electrolytic Water Massage Cup.....97
77	Eustachian Electrode.....82		

## ADJUSTABLE CORD TIPS AND UNIVERSAL CONNECTORS



A

A. McIntosh Adjustable Cord Tips, per pair. . . . . \$0.12

Postage  
2c



C



D



E

C. Universal Cord Tip Connector, to connect cord tip of any battery with McIntosh Battery, each. . . . . \$0.10

Postage  
2c

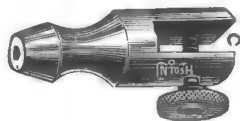
D. Double Connector, for wires and cords, each. . . . . .10

2c

E. Universal Electrode Connector, to connect cord tips of any battery with the McIntosh Electrodes, each. . . . . .10

2c

## DENTAL FORCEPS CONNECTOR



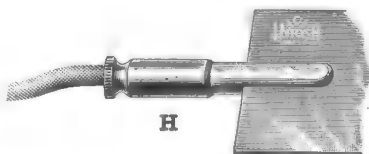
29

29. For connecting conducting cords of battery with Dental Forceps, each. . . . . \$0.25

Postage  
2c

H. Dr. Herdman's Connector, for attaching conducting cord to sheet metal, each. . . . . \$0.10

Postage  
2c



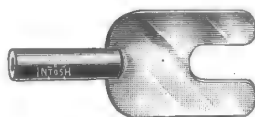
H



H2

H<sup>2</sup>. Dr. Herdman's Connector, for connecting two conducting cords or for attaching to sheet metal, each. . . . \$0.10

Postage  
2c



S

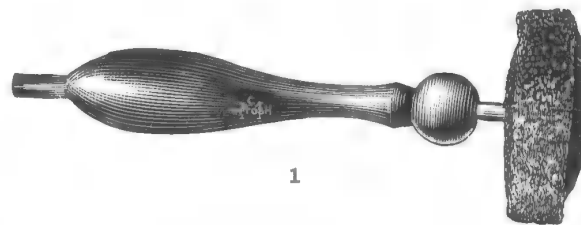


Postage  
2c

S. Handy Connector, for connecting adjustable cord tips with the clamp form of binding posts, each. . . . . \$0.10

2c

## HANDLES AND SPONGE ELECTRODES



1

1. Universal Handles, with Spongio-covered Discs, per pair	\$0.50	Postage 7c
Spongio Discs, per pair	.25	3c
Sponge Discs, per pair	.30	3c
Universal Handles, with Set Screw, per pair	.35	5c



87

87. Universal Handle, with Interrupter, each. . . . . \$0.50

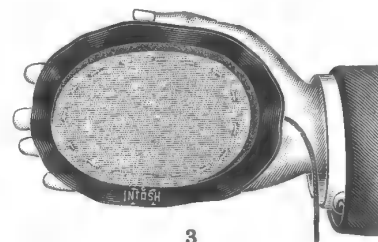
Postage  
3c



40

40. Metal Handles, nickel plated, per pair. . . . . \$0.30

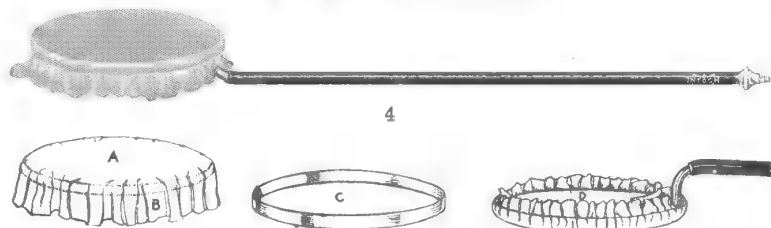
Postage  
6c



3

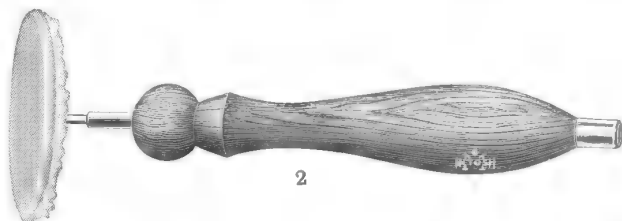
3. Spongio-covered Electrode, insulated with soft rubber for general application with the hand. . . . .	\$0.50	Postage 5c
3A. Sponge-covered Electrode. . . . .	.75	5c

## PAD ELECTRODES



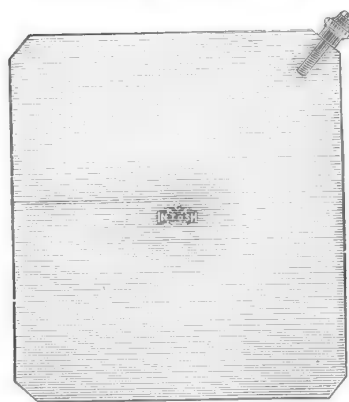
4. Dr. Hubbell's Aseptic Pad Electrode, with long handle.....\$1.50 Postage 15c

This very practical form of electrode offers the important advantage of greater asepsis than any other form of pad electrode. It is far more cleanly and sanitary than the ordinary sponge electrode as it can be instantly fitted with a new covering of gauze or other material for each individual case. The disc A is first covered with a layer of gauze B, after which it is shaped and smoothed out by passing it through the ring C, when the handle is next clamped into position on the back of the pad as in D. The disc is four inches in diameter and is attached to a long handle insulated with hard rubber, making a most suitable appliance for spinal application.



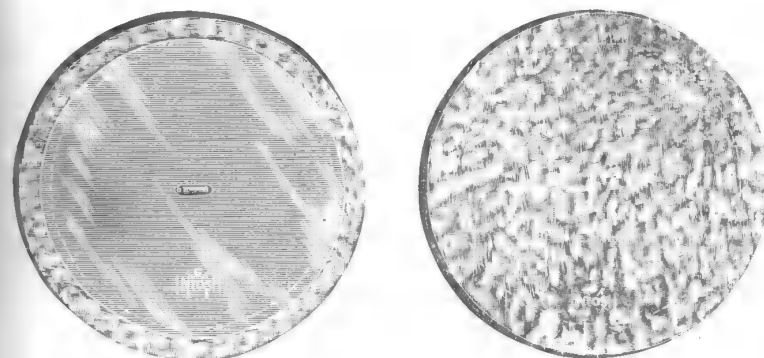
- Dr. Hubbell's Aseptic Disc Electrode, with universal handle.....\$0.50 Postage 5c  
Price, per pair.....1.00 9c

This electrode is constructed on the same plan as the instrument above described, but as the disc is much smaller no ring is necessary to shape the pad, as this can be done by the hand. This instrument will be welcomed by physicians who appreciate the importance of perfect cleanliness in electrical application.



52. Metallic Foot Plate.....\$0.25 Postage 13c

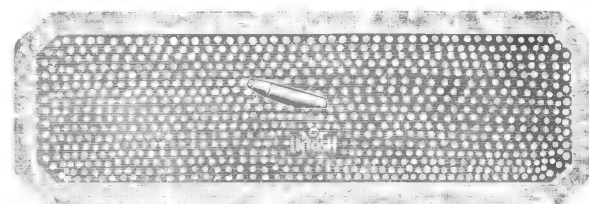
## PAD ELECTRODES



66 Back

66 Face

66. Dr. P. S. Hayes' Spongio-Piline Abdominal Electrode \$1.25 Postage 16



96

96. Dispersive Electrodes, of Perforated Metal, with Covering of Spongio Piline

Size,	4 x 6 inches		\$0.75	5c
"	5 x 7 "		1.00	7c
"	6 x 8 "		1.25	8c
"	7 x 9 "		1.50	10c
"	8 x 12 "		2.00	12c
"	12 x 12 "		2.00	15c
"	6 x 18 "		2.00	15c



30

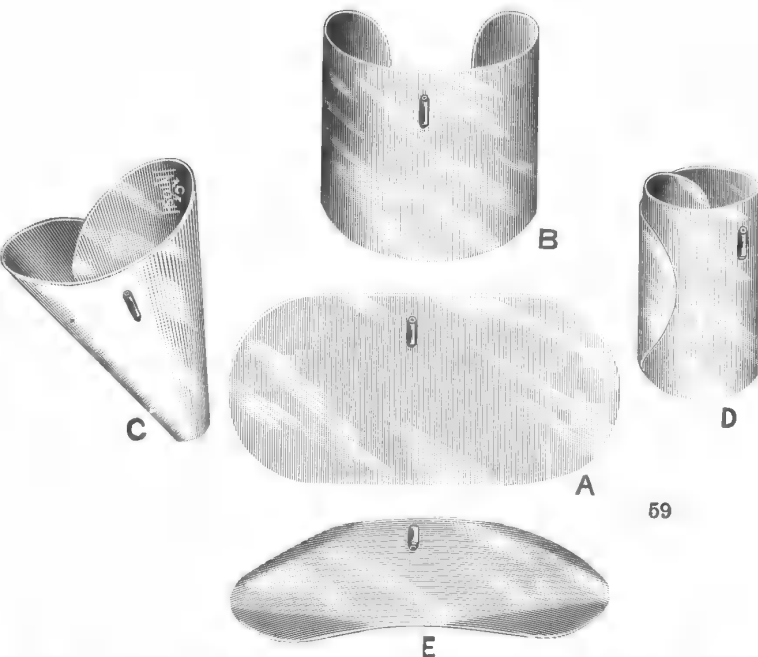


30A

30. Wrist or Arm Electrode \$0.75 Postage 5c  
30A. Neck Electrode......75 4c



## PAD ELECTRODES



59. McLean Universal Electrode..... \$1.00 Postage 14c

The instrument is of an oval shape, measuring 5 x 10 inches. When in use it is intended to be covered with a layer of moist absorbent cotton, or other pad material.

The illustrations give some idea of many diverse forms into which this electrode can be readily molded by the hand; and many others will suggest themselves to the mind of the operator.

Figure A shows a flat formation for surface application.

Figure B illustrates a semi-cylindrical shape suitable for neck, arm or leg.

Figure C sets forth a cornucopia shape useful in scrotal or breast treatment.

Figure D is a tubular or cylindrical formation adaptable in a variety of cases.

Figure E shows the electrode molded to conform to the curves of the abdomen.

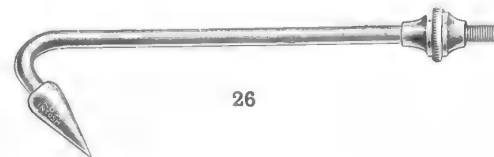
With Galvanic, Faradic and Sinusoidal Currents it makes a convenient abdominal pad and is equally useful for a multitude of general applications and special purposes.

With Static Currents it possesses a similarly wide range of adaptability and is peculiarly suitable in conjunction with the Morton Wave or Static Charging Current.

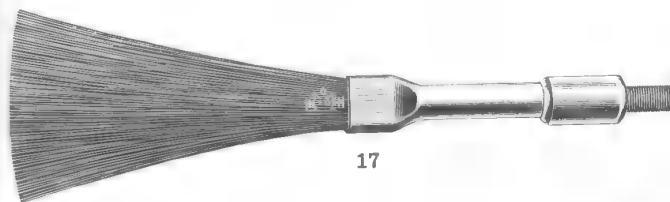
## ELECTRODES FOR MUSCULAR FARADIZATION



102. Erb's Electrode ..... \$0.20 Postage 3c



26. Duchenne's Metallic Points, per pair..... \$1.00 Postage 3c



17. Metallic Brush ..... \$0.40 Postage 3c



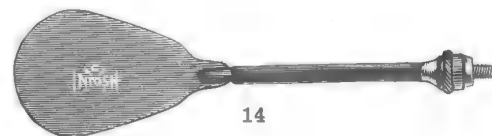
32



33



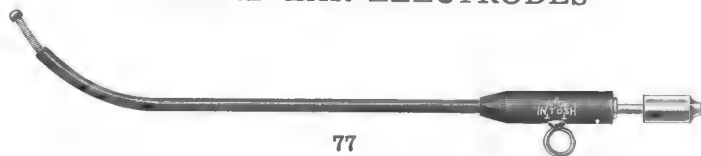
32. Ball Electrode ..... \$0.30 Postage 4c  
33. Disc Electrodes, three sizes, each..... .20 2c



14

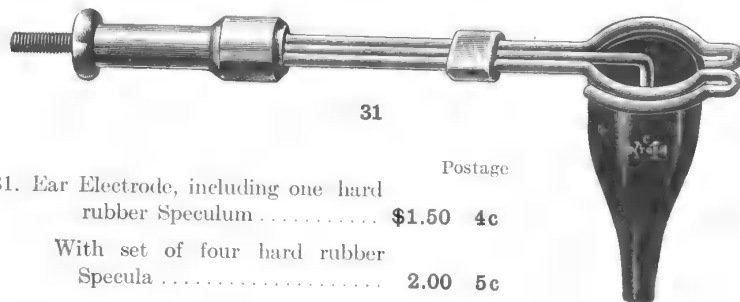
14. Copper Tongue Plate, insulated ..... \$0.50 Postage 3c

## EYE AND EAR ELECTRODES



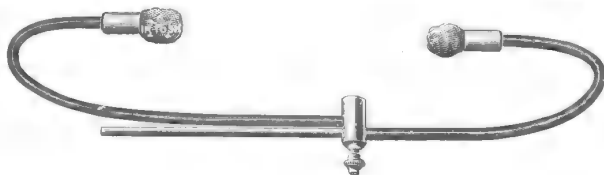
77

77. Eustachian Electrode ..... \$1.50 Postage 3c



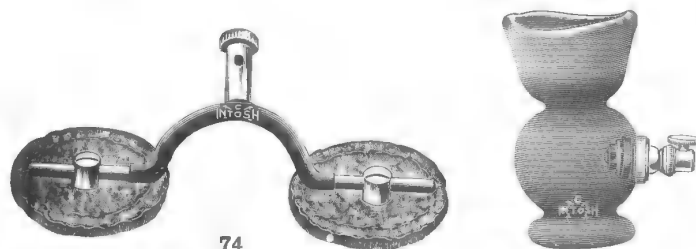
31

31. Ear Electrode, including one hard rubber Speculum ..... \$1.50 Postage 4c  
 With set of four hard rubber Specula ..... 2.00 5c



48

48. Double Ear Electrode, insulated ..... \$1.25 Postage 10c



74

74. Double Eye Sponge Electrode, adjustable ..... \$1.00 Postage 3c  
 34. Eye Cup Electrode ..... 1.00 5c



37

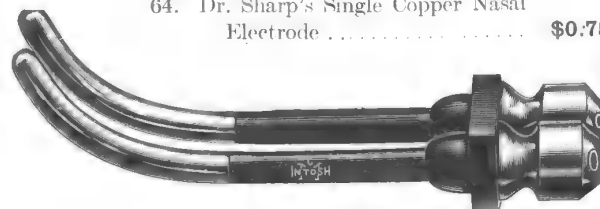
37. Small Eye Electrode, copper ..... \$0.50 Postage 2c

## NASAL AND LARYNGEAL ELECTRODES



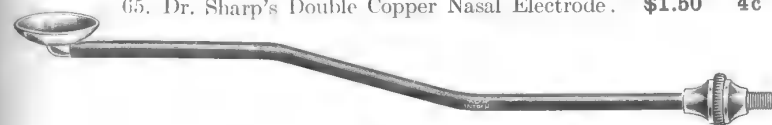
64

64. Dr. Sharp's Single Copper Nasal Electrode ..... \$0.75 Postage 3c



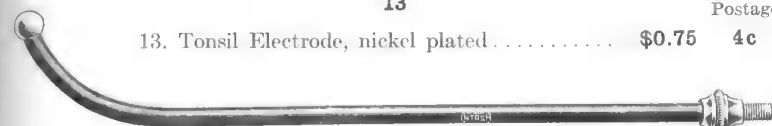
65

65. Dr. Sharp's Double Copper Nasal Electrode. \$1.50 Postage 4c



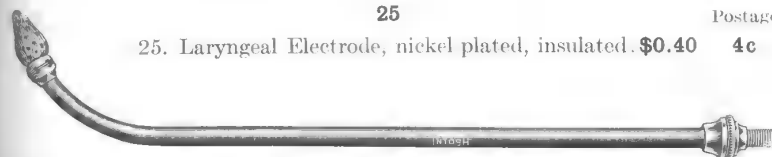
13

13. Tonsil Electrode, nickel plated ..... \$0.75 Postage 4c



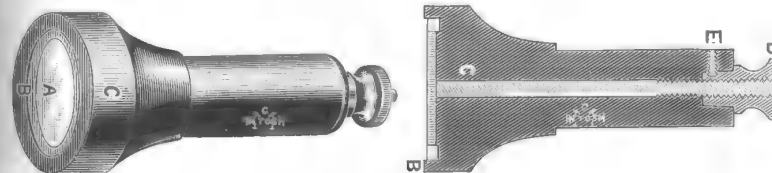
25

25. Laryngeal Electrode, nickel plated, insulated. \$0.40 Postage 4c



28

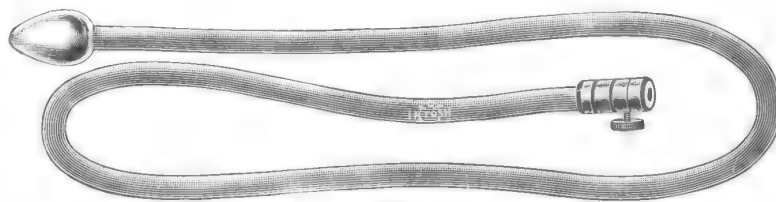
28. Laryngeal Electrode, with sponge tip ..... \$0.50 Postage 4c



113

113. Dr. E. H. McBride's Cataphoric Electrode ..... \$3.00 Postage 5c

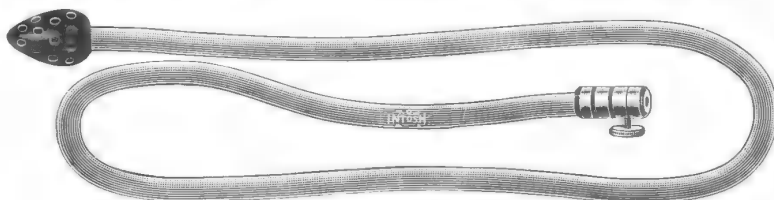
## ESOPHAGEAL AND STOMACH ELECTRODES



55

55. Esophageal Electrode, complete ..... \$2.50 Postage 9c

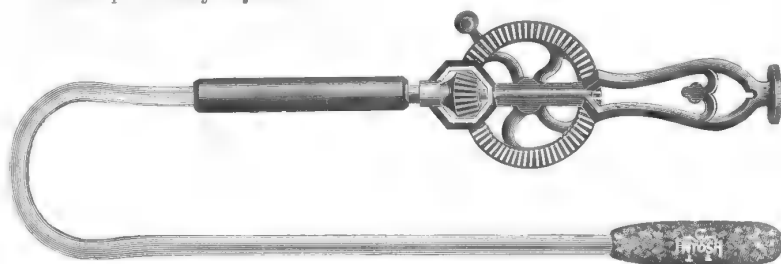
This Electrode has a spiral inside, is very flexible and is insulated with soft rubber. It is 24 inches in length, and is furnished with four metal olives, sizes  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{5}{8}$  and  $\frac{3}{4}$  inches in diameter, which screw firmly on the distal end.



89

89. Stomach Electrode ..... \$2.00 Postage 6c

For the application of Galvanism or Faradism within the Stomach or Rectum. This is a very flexible Electrode, insulated with very smooth colon tube, the olive point being of hard rubber with perforations, so that the current only comes in contact with the mucous surface through an aqueous medium previously injected.



112

112. Dr. F. B. Turck's Gyromele (revolving sound)..... \$3.00 Postage 25c

"The various cultures are secured from the mucous membrane by using a revolving sponge introduced into the empty stomach. This instrument is named the Gyromele (revolving sound), which, for bacteriologic purposes, is inclosed in a sheath until it reaches the stomach to prevent contamination from the mouth and esophagus. Revolutions are produced by an apparatus not unlike a surgical drill, which revolves the sponge in the stomach and removes the adherent material from the mucous membrane for bacteriologic investigations."—Dr. Fenton B. Turck on the "Early Diagnosis of Carcinoma of the Stomach," etc.

## VAGINAL ELECTRODES



9

9. Vaginal Electrode, nickel plated ..... \$0.50 Postage 7c



68

68. Curved Vaginal Electrode, nickel plated, insulated... \$1.25 Postage 7c



86

86 Dr. A. H. Goelet's Bipolar Vaginal Electrode, nickel plated ..... \$2.00 Postage 6c



116

116. Goldspohn's Copper Ball Vaginal Electrode..... \$0.75 Postage 6c

116A. Goldspohn's Carbon Ball Vaginal Electrode..... 1.25 5c

116B. Zinc Ball Vaginal Electrode, for zinc-mercury amalgam cataphoresis..... 1.00 6c

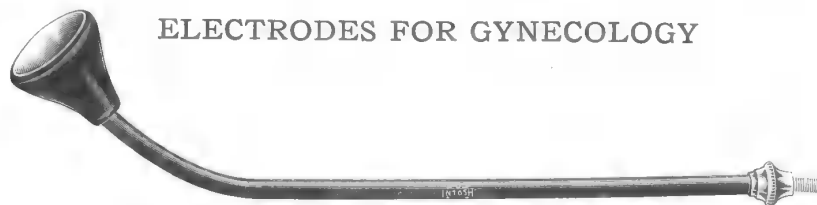


95

95. Neiswanger's Vaginal Cataphoric Electrode ..... \$2.50 Postage 9c

It consists of a perforated copper ball, mounted on an insulated tube, fitted with nozzle and cord tip connection, affording a means of applying the oxy-chloride of copper together with a cataphoric dosage of a desired medicament.

## ELECTRODES FOR GYNECOLOGY



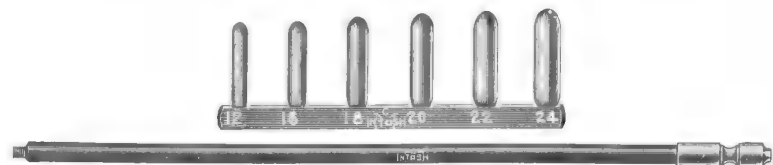
16

16. Cup-shaped Electrode for Uterus, on insulated staff... \$1.50 Postage 6c



91

91. Fitz Hugh's Copper Electrode for treating erosions of the external os by metallic electrolysis..... \$1.25 Postage 6c



104

104. Staff and Copper Olives for metallic electrolysis.... \$2.50 Postage 7c

104B: Staff and Zinc Olives, for zinc-mercury amalgam cataphoresis ..... 2.50 7c



93

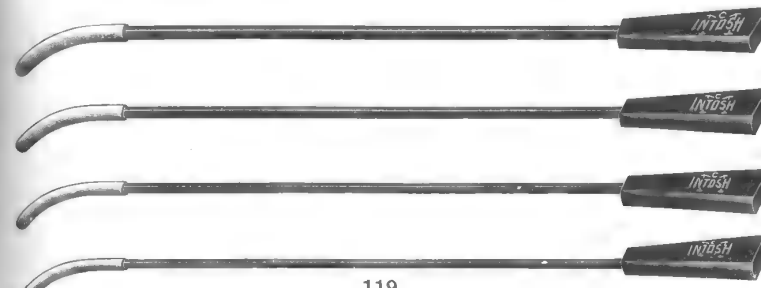
93. Apostoli Bi-polar Intra-Uterine Electrode ..... \$2.00 Postage 5c



101

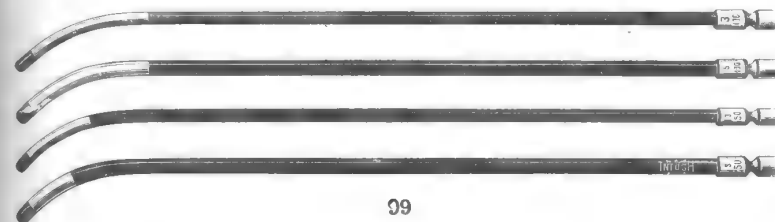
101. Dr. Martin's Double Copper Intra-Uterine Electrodes, per set of two, including muffs..... \$2.00 Postage 20c  
Price, one only, including muff ..... 1.00 10c  
Small size 3 and 5mm; large size 7 and 10mm.

## ELECTRODES FOR GYNECOLOGY



119

119. Dr. Goldspohn's Copper Intra-Uterine Electrodes, per set of four, sizes 12 to 20, French..... \$3.00 Postage 11c  
Price, one only..... 1.00 5c



99

99. Neiswanger's Copper Intra-Uterine Electrodes, insulated tip and stem, per set of four ..... \$4.00 Postage 9c  
Price, one only ..... 1.25 4c



115

115. Goelet's Intra-Uterine Negative Dilating Electrode, nickel-plated, set of three bulbs with one staff..... \$1.25 Postage 6c  
115A. Same as above, in pure copper..... 1.50 8c  
115B. Same as above, in zinc, for zinc-mercury amalgam cataphoresis ..... 1.50 6c



98

98. Dr. Martin's Block Tin Intra-Uterine Electrode, including rubber muff ..... \$1.00 Postage 7c

## RECTAL ELECTRODES



6. Rectal Electrode, nickel plated ..... \$0.50 Postage 6c



7. Rectal Electrode, insulated with polished hard rubber, nickel plated ..... \$0.75 Postage 5c



53A. Copper Rectal Electrode, for hemorrhoids..... \$1.00 Postage 5c



85. Curved Rectal Electrode ..... \$1.25 Postage 8c



67. Dr. Patterson's Hollow Rectal Electrode ..... \$1.75 Postage 5c

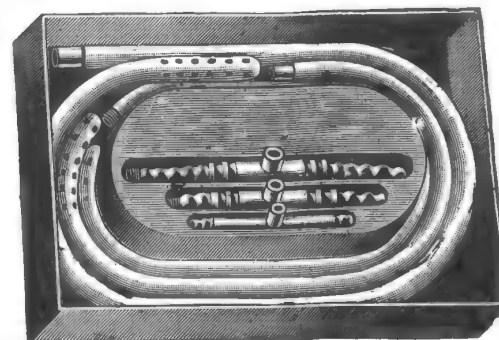
This consists of a perforated copper bulb, containing a hollow chamber attached to an insulated tube with cord tip socket and nozzle. When in use the chamber can be packed with moist cotton, thus hastening the action of the metallic electrolysis; a covering of Goldbeater's skin being usually employed.

## A GOOD LUBRICANT FOR ELECTRODES

Dr. C. S. Neiswanger of Chicago, the eminent electro-therapeutist, recommends the following as a most satisfactory lubricant and one that does not interfere with the action of the current:

Take 1 oz. of the best white gum tragacanth, put into a quart mason jar and add 1 pint of water and 1 pint of glyco-thymoline, or any other anti-septic solution; let stand until tragacanth is dissolved.

## RECTAL ELECTRODES

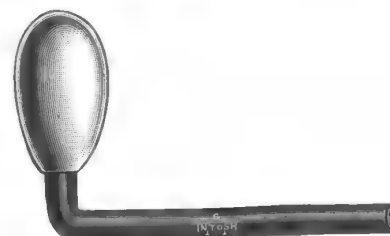


131

131. The Johnson Hydro-Electric Rectal Tubes and Catheters—  
Price, as shown in cut, set of three ..... \$5.00 Postage 20c  
Price, one only, large size, complete..... 2.00 10c  
Price, one only, medium size, complete..... 1.75 6c  
Price, one only, small size, complete ..... 1.50 3c  
Price, rubber catheter only, either size ..... 1.00 2c



126. C. W. Bowen Prostatic Electrode..... \$3.00 Postage 7c



63

63. Dr. Rice's Improved Rectal Electrode ..... \$1.00 Postage 5c  
For use in sitting posture with "Static Surging Current."



143

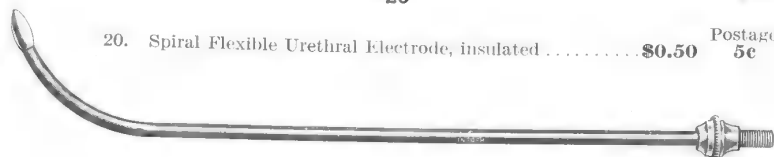
143. Copper Fistula Electrode ..... \$0.50 Postage 3c

## URETHRAL ELECTRODES



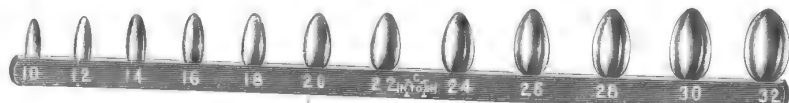
20

20. Spiral Flexible Urethral Electrode, insulated ..... \$0.50 Postage 5c



21

21. Urethral Electrode, insulated with hard rubber..... \$0.50 Postage 5c



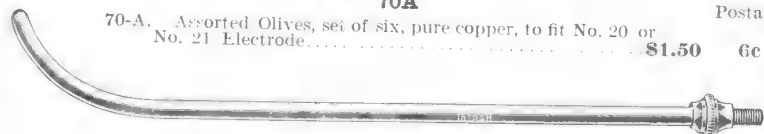
70

70. Assorted Olives, set of twelve, nickel plated, to fit No. 20 or No. 21 Electrode..... \$1.50 Postage 8c



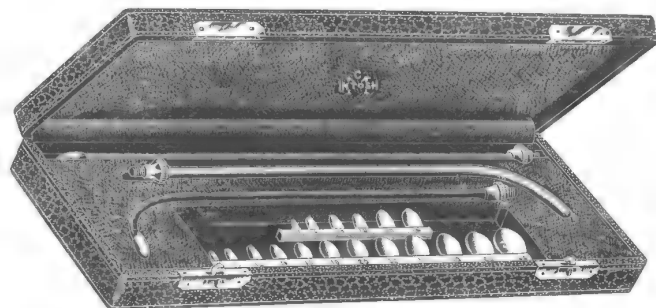
70A

70-A. Assorted Olives, set of six, pure copper, to fit No. 20 or No. 21 Electrode..... \$1.50 Postage 6c



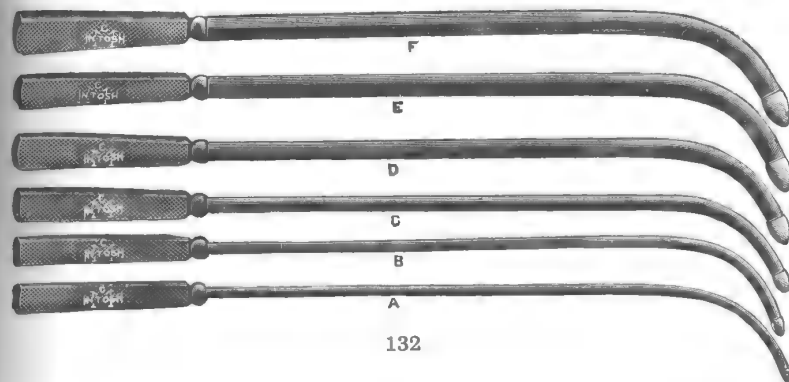
50

50. Metallic Sound, nickel-plated ..... \$0.50 Postage 6c



Genito-Urinary Electrode Case..... \$6.00 Postage 21c  
Consists of metallic sound, flexible and inflexible urethral electrodes, two sets of olives, nickel plated and copper, all contained in a plush lined case.

## URETHRAL ELECTRODES



132

132. Newman's Curved Urethral Electrodes, sizes 12, 15, 18, 21, 24 and 28, French, each ..... \$1.00 Postage 8c  
Set of six, in plush-lined case..... 7.50 20c

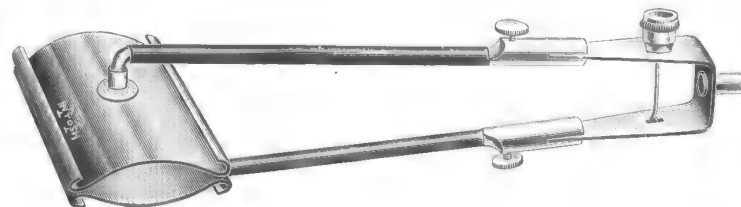
These Electrodes are made with the hard rubber insulation, vulcanized onto the metal stem, thus guarding against all danger from septic poisoning.



100

100. Neiswanger's Cataphoric Electrode, for making applications to the prostatic urethra, as shown in cut... \$1.00 Postage 8c

100A. Neiswanger's Cataphoric Electrode, with perforations covering full length of stem..... 1.25 8c



109

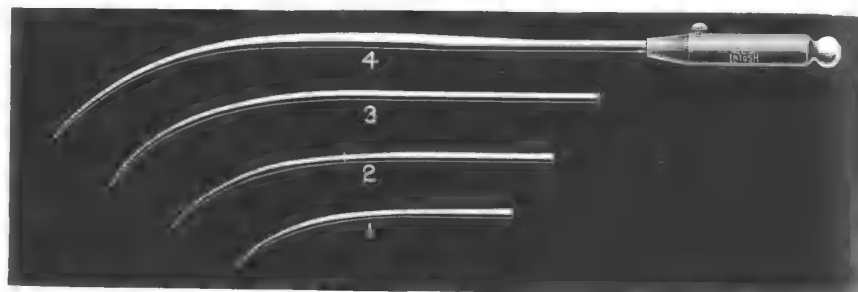
109. Neiswanger's Varicocele Electrode ..... \$1.00 Postage 3c

## NEEDLE HOLDERS AND NEEDLES FOR ELECTROLYSIS



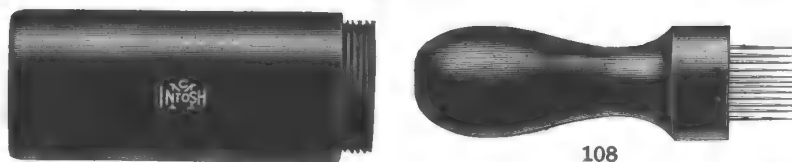
47. Straight gold-plated needles for Electrolysis, sizes 1, 2, 3 and 4, each .....  
Each needle is furnished with tip holder.

\$0.40

Postage  
3c

- 47A. Half curved gold-plated needles for Electrolysis, sizes 1, 2, 3 and 4, each .....  
Each needle is furnished with tip holder.

\$0.40

Postage  
3c

108. Needle Disc, for the removal of "Pigmentary Naevus" or wine marks .....

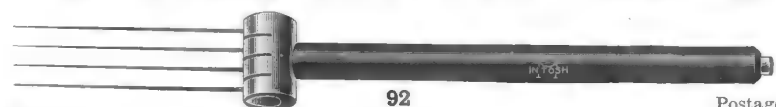
\$2.00

Postage  
3c

106. Dr. W. E. Casselberry's Bi-Polar Needle Holder ...

\$1.00

4c



92. Multiple Needle Holder .....

\$1.00

Postage  
3c

## NEEDLE HOLDERS FOR ELECTROLYSIS



60

60. Hard Rubber Needle Holder. ....

\$0.75

Postage  
2c

61

61. Hard Rubber Needle Holder, with Interrupter. ....

\$1.00

Postage  
3c

107

107. Hard Rubber Needle Holder, round .....

\$0.75

Postage  
2c

107A

- 107A. Needle Holder with Magnifying Glass .....

\$1.50

Postage  
3c

A new and convenient device for use in epilation. The needle holder will receive any size needle, while the lens may be adjusted to the proper focus by means of the sliding sleeve on which it is mounted.



72

72. Depilatory Forceps .....

\$0.40

Postage  
2c

## NEEDLES FOR EPILATION

- Steel broaches (sharp) each .....  
Steel broaches (sharp) per dozen .....  
Hayes' bulbous-pointed steel needles, each .....  
Hayes' bulbous-pointed steel needles, per dozen .....

\$0.05

.50

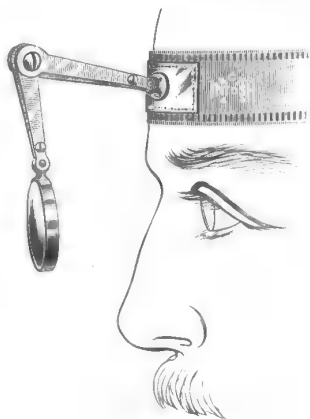
.10

1.00

Postage  
2c  
2c  
2c  
2c



## EPILATION ACCESSORIES



133

133. Neiswanger's Magnifying Glass ..... \$1.50 Postage 5c



114

114. Magnifying Glass ..... \$0.50 Postage 3c



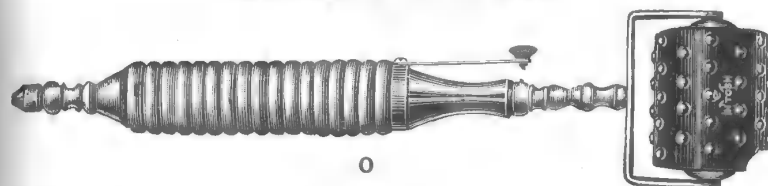
2

An excellent assortment of accessories for electrolysis, including hard rubber needle holder, magnifying glass, forceps, six Hayes' bulbous-pointed steel needles and two steel broaches.

No. 2 Needle Case ..... \$3.75 Postage 8c

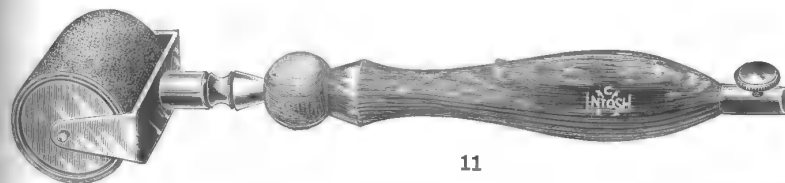
In the operation for the removal of superfluous hair by electrolysis, a good magnifying glass is an essential requisite, and as it is a matter of great inconvenience to use the ordinary glass (both hands being already employed with needle and forceps) the above has been devised. It is light and convenient, and can be used on the head of the operator or patient. Being provided with two joints, it is easily and quickly adjusted and the focal distance being five inches, allows of ample working room between the glass and seat of operation.

## MASSAGE ROLLERS



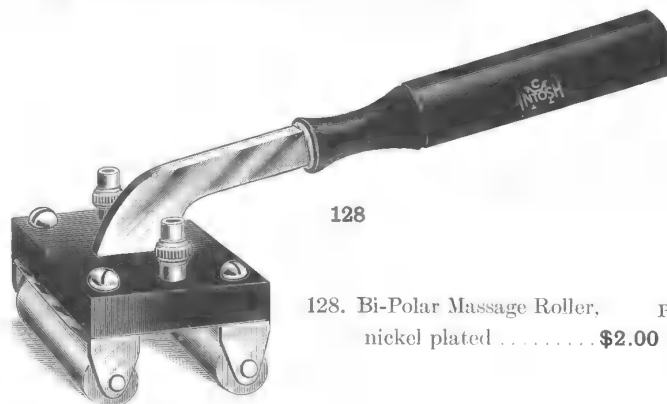
O

O. Roller Electrode of hard rubber, with metallic points for muscular faradization, fitted with universal hard rubber handle, with interrupter..... \$2.00 Postage 8c  
O. Universal hard rubber handle with interrupter, only 1.00 4c



11

11. Massage Roller, nickel plated, chamois-covered ..... \$1.00 Postage 7c



128

128. Bi-Polar Massage Roller, Postage nickel plated ..... \$2.00 10c



138

138. Large Roller for body massage, nickel plated ..... \$2.00 Postage 10c

## MASSAGE APPLIANCES



35

35. Hair Brush Electrode ..... \$0.75      Postage 5c



141

141. Sanitary Hair Brush Electrode..... \$2.00      Postage 10c

A new and unique instrument for Electrical Scalp Treatment; it offers a number of advantages over the ordinary hair-brush electrode, chief of which are the durability of the appliance and the ease with which it can be rendered thoroughly aseptic.

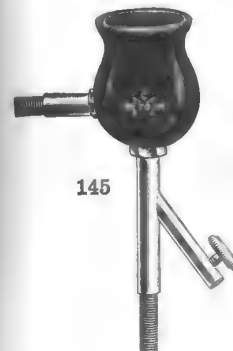


142

142. Carbon Cylinder Electrode..... \$0.75      Postage 5c

A very convenient Carbon Electrode, especially suited to applications with the positive pole; size, five inches in length by three quarters of an inch in diameter. It was designed by a dermatologist for bleaching the face, but it is useful in any treatment where a non-corrosive electrode of this shape is suitable.

## MASSAGE APPLIANCES



145

A hard rubber cup arranged with inlet and outlet for a stream of water and a connection for the conducting cord from a battery. When used with the galvanic current it proves a powerful stimulant to the skin, as medicated solutions can be employed in connection, and it can also be attached to a faradic battery. It is supplied with rubber tubing for outlet and for attaching to any ordinary water bag.

145. Electrolytic Water Massage Cup ..... \$3.50      Postage 14c



139

139. Vacuum Cup Massage Electrode ..... \$1.25      Postage 5c

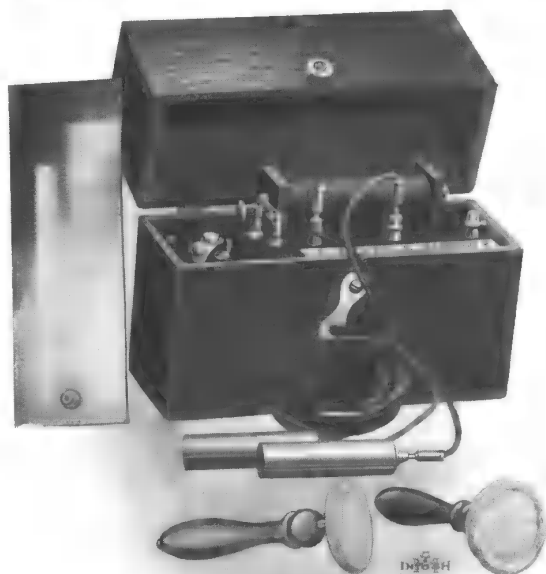
This is one of the most up-to-date massage instruments on the market to-day. As its name indicates, it combines the use of electricity with vacuum massage. It affords one of the most pleasant methods of applying electricity to the face, as the instrument makes especially good contact, owing to the vacuum pressure, thus doing away with the unpleasant stinging sensation which prevails with instruments making poor contact. It brings the glow of health back to faded cheeks. It may be used with any faradic battery.



12

12 Comedone Extractor ..... \$1.00      Postage 3c

## McINTOSH DOMICILE BATTERY



Price. .... \$5.00

We illustrate above a very neat and altogether new design in a Dry Cell Faradic Battery, especially adapted to home use; it will be found very popular with physicians who wish to provide patients with a suitable battery inasmuch as it has been devised to meet these especial requirements.

The Coil is of an elongate form and is of very substantial construction and quite pretty in design. It has both Primary and Secondary windings, from which may be obtained either Primary, Secondary or Combined Primary and Secondary Currents; all of which may be graduated from low potential to full intensity by withdrawing the sliding shield, the polarity being indicated on the metal name plate just in front of the binding posts; and the rate of vibration being adjusted by turning the milled thumb-screw which is in contact with the vibrator spring.

The Switch used to start the coil is so placed that the box cannot be closed until turned off; nor can it be accidentally turned on by a sudden jar in transit, a precaution which prevents the cell from being run down unawares.

The case is of oak, in dark Old English finish, measuring  $8\frac{1}{2}$  x  $7\frac{1}{8}$  x  $3\frac{1}{4}$  inches, and a compartment for electrodes is provided in the lid, the footplate forming a cover for this section.

The cell used is the standard size,  $2\frac{1}{2}$  x 6 inches, making it an easy matter to obtain renewals in any city or town, or, in fact, in the most remote hamlet. With ordinary use in domestic application the cell should last for about six months.

## LIST OF ATTACHMENTS FURNISHED WITH BATTERY

- 1 Pair Conducting Cords (two colors).
  - 1 Pair No. 40 Nickeled Tubular Metal Handles.
  - 1 Pair No. 1 Wooden Handles (to hold Spongio Discs).
  - 1 Pair Spongio Discs.
  - 1 Nickeled Foot Plate.
  - 1 Pamphlet of Instructions.
- For prices of cells, for renewal, see p. 25.

SHIPPING WEIGHT, 9 LBS.

## McINTOSH MASSEUSE BATTERY



Price, complete ..... \$6.75

The outfit illustrated above is one especially suited to the requirements of hair-dressers and dermatologists who desire a battery with a complete set of appliances for facial and scalp application, and makes a valuable addition to the equipment of a beauty parlor.

The battery is similar to the "Domicile," shown on opposite page, differing only in the number of accessories furnished.

## LIST OF ATTACHMENTS FURNISHED

- 1 Pair Conducting Cords (2 colors).
- 1 Pair No. 40 Nickeled Tubular Metal Handles.
- 1 No. 1 Wooden Handle with Spongio Disc.
- 1 No. 11 Massage Roller Electrode.
- 1 No. 30 Wrist Sponge Electrode.
- 1 No. 35 Hair Brush Electrode.
- 1 Nickeled Foot Plate.
- 1 Pamphlet of Instructions.

For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 10 LBS.

## McINTOSH No. 44 MASSAGE BATTERY



Price, complete..... \$7.50

The outfit consists of: 1 McIntosh No. 44 Faradic Battery, 1 pair Conducting Cords, 1 pair Metal Handles, 1 No. 1 Handle and Spongio Disc, 1 No. 30 Wrist Electrode, 1 No. 35 Hair Brush, and 1 No. 11 Massage Roller.

The Battery is supplied with two No. 4 Columbia Dry Cells, which, with ordinary use, will last from six to nine months.

This outfit is especially designed for Masseurs who wish to apply electricity in Shampoo and Massage of the Head and Face.

Electric Massage affords a pleasant and sure relief for headache, neuralgia and nervous fatigue; it tones up the muscles and nerve centers, acting as a tonic to the entire system.

Full instructions accompany each outfit.

For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 9 LBS.

## McINTOSH ELECTROLYSIS BATTERY



Price, complete..... \$12.00

A CONVENIENT PORTABLE BATTERY FOR USE IN REMOVAL OF SUPERFLUOUS HAIR AND OTHER FACIAL BLEMISHES.

The three features which are considered by most dermatologists in the selection of a battery and outfit for this class of work are, in their respective importance: reliability, simplicity and portability.

In designing the battery shown in the accompanying illustration, all of these points have received due consideration. It is fitted with six Columbia No. 4 Dry Cells—cells which we have found to be the most reliable. With ordinary use and proper care, they should last for from six months to a year. The battery is put up in a handsome Morocco case with a neat leather handle. A compartment is provided within the case for all necessary electrodes, cords, etc.

#### THE COMPLETE OUTFIT INCLUDES THE FOLLOWING ACCESSORIES

1 Pair Conducting Cords; 1 No. 60 Needle Holder; 6 Hayes' Needles; 2 Steel Broaches; 1 Pair No. 72 Forceps; 1 Magnifying Glass; 1 No. 3 Hand Spongio Electrode; 1 Pair No. 1 Handles and Spongio Discs; 1 copy Hayes' "Electricity in Facial Blemishes."

For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 11 LBS.

## McINTOSH 14 DRY CELL COMBINED GALVANIC AND FARADIC BATTERY



Price, including Conducting Cords, Universal Handles and Spongio  
Dises..... **\$17.50**

This most desirable Physicians' Galvanic and Faradic Battery is provided with fourteen No. 4 Columbia Dry Cells; twelve in the galvanic portion and two connected to the coil.

The galvanic cells are connected to a cell selector switch which affords control of the current. The galvanic current is of sufficient strength to treat any case where a mild current is indicated; it furnishes ample current for the removal of superfluous hair and all blemishes, such as moles, warts, naevi, etc. The galvanic current may also be used for lighting diagnostic lamps. The galvanic and faradic currents can be combined if desirable.

The faradic coil gives a perfectly regulated faradic current of variable intensity. An "on" and "off" switch places the coil in action. Another switch permits of the selection of either primary or secondary current. The cells of this battery should last six months or a year. They are connected in a very simple manner, so that it is the work of but a few moments to replace them when necessary. The battery is put up in a plush-lined, morocco-covered case, which is fitted with a leather handle. A large compartment for conducting cords, electrodes, etc., is provided in the lid.

For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 20 LBS.

## McINTOSH 14 DRY CELL E. & M. BATTERY



Price, complete..... **\$22.50**

The above illustration portrays the battery shown on opposite page, arranged as an electrolysis and massage outfit. The galvanic current is of sufficient strength to perform any treatment in electrolysis of facial blemishes or removal of superfluous hair. By means of the cell selector the strength of the current can be perfectly controlled.

The Massage Battery is most complete in its appointments. The current secured from the coil is of the most pleasant nature; giving tone to the tissues wherever applied. The battery is put up in a handsome leather-covered case, and fitted with a carrying handle. A plush-lined compartment is provided in the lid for the conducting cords and instruments.

### FOR ELECTROLYSIS

- 1 Hard Rubber Needle Holder.
- 6 Hayes Bulbous Pointed Needles.
- 2 Steel Broaches.
- 1 No. 114 Magnifying Glass.
- 1 pair No. 72 Forceps.
- No. 3 Hand Spongio Electrode.

### FOR MASSAGE

- 1 pair Conducting Cords.
- 1 pair No. 1 Universal Wood Handles.
- 1 pair No. 1 Spongio Dises.
- 1 pair No. 40 Metal Handles.
- 1 No. 30 Wrist Band Electrode.
- 1 No. 11 Massage Roller.
- 1 No. 35 Hair Brush Electrode.

For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 21 LBS.

## McINTOSH "SIMPLIFIED" 27 DRY CELL GALVANIC AND FARADIC BATTERY



Price, including Conducting Cords, Universal Handles and Spongio Discs. . . . . **\$25.00**

The apparatus here illustrated embodies these features counted essential in a simplified form of physicians' portable galvanic and faradic dry cell battery, adequate for the requirements of many of the operations requiring a current of moderate strength. It is of similar construction to the Fourteen Dry Cell Combined Battery illustrated on page 102, and is fitted with twenty-seven No. 4 Columbia dry cells—twenty-five being connected in the galvanic circuit and two utilized for the faradic coil.

Regulation of the galvanic current is afforded by a double cell selector switch enabling the operator to add single cells to the circuit, or to select cells from any part of the circle, the number of cells employed serving as an index to the strength of current utilized. An interrupting key permits of an interruption of the galvanic current, which is especially useful for diagnostic purposes.

The faradic coil is of ample proportions and is fitted with a vibrator of smooth and even action, thus affording a very powerful and pleasing current, the strength of which may be varied by the sliding shield. The primary and secondary currents are selected by a suitable switch and are obtained from the binding posts adjacent to the coil.

The battery offers a very wide range of work, as it affords a constant galvanic current of sufficient intensity to suit almost any case, an interrupted galvanic current, a faradic current from either primary or secondary coil, a galvano-faradic current and a current to light diagnostic lamps.

The accessories of the battery are mounted upon a black enameled slate base, and the apparatus is enclosed in a handsome quarter sawed oak case in the popular weathered finish, measuring 7x9x17 inches.

For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 35 LBS.

## McINTOSH "ELABORATE" 27 DRY CELL GALVANIC AND FARADIC BATTERY



Price, including Conducting Cords, Universal Handles and Spongio Discs. . . . . **\$35.00**

The illustration shows a companion battery to the one portrayed on opposite page, differing, however, with regard to the control and measurement of the galvanic current. The galvanic current is obtained from twenty-five No. 4 Columbia dry cells connected in series, controlled by the MacLagan Wire rheostat and measured by the McIntosh improved milliamperemeter, scale reading 0-150, and obtained from the binding posts facing the meter. An "on" and "off" switch permits of the meter being removed from the circuit when it is desirable to light diagnostic lamps of large capacity.

The faradic coil is similar to the one described on the preceding page, being operated by two cells; the current obtained therefrom is brought likewise to a separate set of binding posts.

The greatly simplified system of wiring arrived at by connecting the galvanic and faradic circuits independently, adds greatly to the immunity from short circuit to the cells, and also permits of the galvanic and faradic currents being combined in a very simple and convenient manner.

This battery affords a galvanic current of great adaptability, a primary faradic current, a secondary faradic current, a galvano-faradic current, and a current to light diagnostic lamps.

The outfit is finished in the same general style as the one shown on foregoing page, and is likewise put up in a weathered oak case of the same dimensions

For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 38 LBS.

## McINTOSH "UNIVERSAL" 45 DRY CELL COMBINED GALVANIC AND FARADIC BATTERY



Price, complete, including conducting cords, universal handles, spongio discs and series current tap with cord. . . . . **\$50.00**

A very powerful and complete physicians' portable battery, embracing 43 No. 4 Columbia dry cells in the galvanic portion and two in the faradic section. The battery plate is a highly polished enameled slate base upon which is mounted the MacLagan Wire Rheostat, McIntosh Improved Milliamperemeter, reading 0 to 100, a Faradic Coil with Singing Rheotome and Slow Vibrator and a Pole Changer, together with other necessary switches and binding posts.

For office use it can be connected with the 110 volt direct lighting current, thus preserving the life of the cells. The following currents are obtainable: Galvanic current, Primary Faradic current, Secondary Faradic current and current to light Diagnostic Lamps.

The battery is put up in a handsome quarter sawed golden oak case, measuring  $9\frac{1}{2} \times 11 \times 18$  inches, and is furnished with carrying strap. The outfit will give service for eight months to a year without recharging. The cells can be readily removed and new ones replaced without necessitating the return of the battery to us.

Full instructions for operating and renewing accompany each battery. For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 65 LBS.

## McINTOSH HIGH TENSION FARADIC BATTERY



Price, including Conducting Cords, Universal Handles, Spongio Discs and Series Current Tap, with cord. . . . . **\$25.00**

The illustration pictures a perfected form of physicians' portable faradic battery, equipped with all of the latest devices known in the field of practical faradism. The faradic coil consists of 230 feet of No. 20 wire in the primary, and 4,500 feet of No. 36 wire in the secondary; the latter being tapped at 1,500 and 3,000 feet respectively, thus permitting of the selection of a greater or lesser length of wire.

The Singing Rheotome or "ribbon vibrator" on the one hand, and the Slow Vibrator on the other, permit of the use of a great variety of vibrations; in fact, affording the full range of faradic application. The coil is energized by three dry cells of standard size,  $2\frac{1}{2} \times 6$  inches, or, for office use, it may be connected with either the direct or alternating current of 110 volts, thus preserving the life of the cells.

The much lauded high tension faradic current from a long, fine wire secondary coil, actuated by an interrupter of exceedingly rapid vibration suited for producing local anaesthesia, as well as the slowly interrupted current from a short, coarse wire primary, adapted to muscular treatment, are offered by this apparatus; all of these currents being controlled perfectly by the MacLagan Wire Rheostat.

The accessories of the battery are mounted on a neat black enameled slate base and contained in a handsome quarter sawed golden oak case.

For prices of cells for renewal, see page 25.

SHIPPING WEIGHT, 30 LBS.



## McINTOSH COMBINED GALVANIC AND FARADIC FLUID BATTERY

This Battery is constructed on an improved plan. The zinc and carbon plates are arranged in couples and securely clamped to hard-rubber plates with thumb-screws. Thus any of the couples can be removed by simply loosening a screw. The thumb-screws are also used for binding posts. By this manner of connecting the plates are brought nearer together than in any other battery, thus giving less internal resistance. The cells are made in sections of six and a drip-cup, composed of one solid piece of hard rubber. By this arrangement one section can be handled, emptied and cleaned as easily and quickly as one cell. It also prevents the liquid from running between the cells, as is the case when single cells are used, and danger of breaking, as is the case with glass cells. The drip-cup on the side of each section of cells is to receive the zinc and carbon plates when removed from the cells. We control the manufacture of these cells and carefully test them with acid the same strength as battery fluid. By this test we know that every cell is perfect before it leaves the factory.

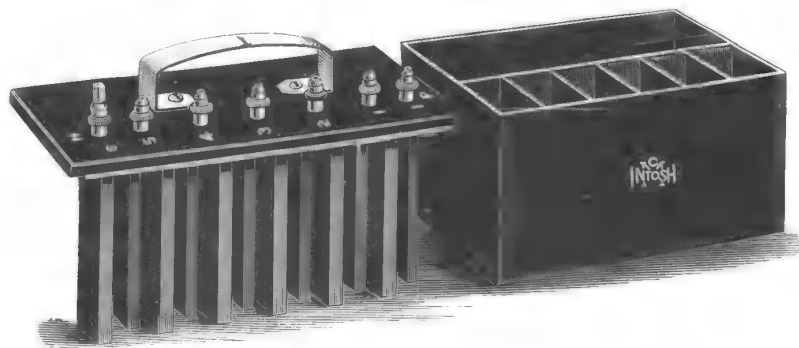


Fig. 1

Fig. 1 shows the hard-rubber plate of a section (on the under-surface of which is cemented a sheet of soft vulcanized rubber) and binding posts which project through the hard and soft rubber and screw into the brass pieces holding the zinc and carbon couples. The rubber plate on which the couples are clamped projects over on one side enough to cover the cells when the zinc and carbon plates are placed in the drip-cups. When the cells are not in use, and the lid of the battery box is closed, it presses on the spring handle of the section (Fig. 1) and holds the soft rubber firmly over the cells and drip-cup. By this arrangement the hydrostat is made water-tight.

Fig. 2 shows a section of six cells and a drip-cup, made of one piece of hard vulcanized rubber. The drip-cup is to receive the zinc and carbon couples when not in use.

By means of the bifurcated conducting cord furnished with the battery it is possible to select as many cells as are desired, adding one after another, without shock or discomfort, until the proper strength is obtained.

Fig. 2

## McINTOSH COMBINED GALVANIC AND FARADIC FLUID BATTERY

The electrolyte used in this battery is a compound consisting of the following ingredients: Sulphuric acid (commercial) 3 fluid oz.; Powd. Bichromate of Potash, 2 oz.; Water, 16 fluid oz.; Bisulphate of Mercury, 2 drachms. The Bisulphate of Mercury is first dissolved in water, after which the Bichromate of Potash is added, and when all is dissolved the sulphuric acid is poured in. The liquid should be allowed to cool before using it, to avoid injuring the battery.

When freshly charged, each cell of this battery yields an E. M. F. of two volts, and when put to considerable usage it still gives about one and three-fourths; thus, a 12-cell battery affords from 21 to 24 volts, an 18-cell battery between 32 and 36 volts, and the 24-cell size a voltage of from 42 to 48.

This Zinc-Carbon-Bichromate Battery is especially well adapted to be used in the country, and in localities remote from large cities, owing to the ease with which the battery can be recharged, as the chemicals can be obtained at almost any drug store, while zinc elements can be kept on hand almost indefinitely.

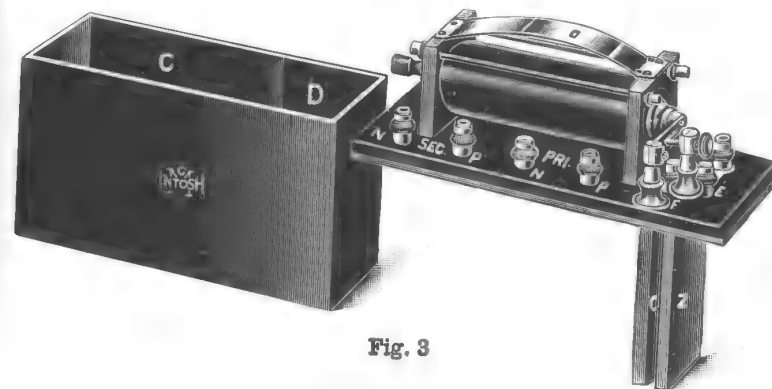


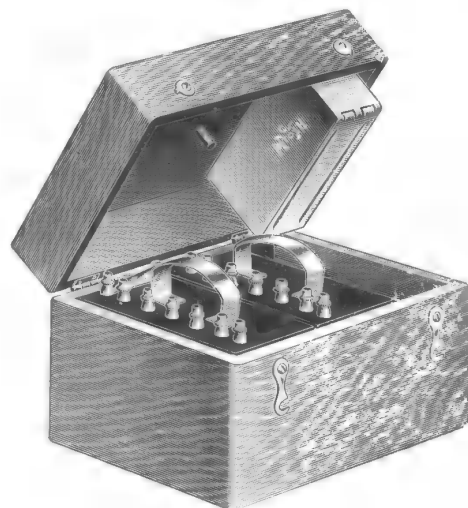
Fig. 3

An extra cell of large size is added to the Combined Battery for the purpose of running the Faradic Coil (fig. 3). This extra cell gives sufficient power for the faradic current, and the operator is not obliged to connect and exhaust the current from the galvanic cells. If greater strength is ever needed in an emergency than the extra cell gives, the galvanic cells can be connected with the coil. The Faradic Coil (fig. 4) is securely fastened on a plate of polished hard rubber, which serves for a cover to the large cell and drip-cup and to hold the elements. Soft rubber is cemented on the under side of this plate, which is securely clamped over the cell and drip-cup, when the lid of the battery box is closed by means of pressure on the spring fastened on the coil.

The Faradic Coil is wound with special reference to the proportion of wire used in the primary and secondary windings so as to give a pleasant though powerful current, which is free from the sharp, stinging sensation experienced with so many batteries having coils made to give a current of great intensity without regard to quantity. Each battery is furnished with an aluminum electrode box, which is placed in the lid of the case. A pair of Conducting Cords, Universal Handles and Spongio Discs accompanies each battery.

These batteries are so simple of construction that anyone can easily operate them, with the printed instructions furnished. All parts of these batteries are made interchangeable, so that in case any part is broken, a duplicate can be obtained and put in place without difficulty.

## McINTOSH GALVANIC FLUID BATTERIES



**12 Cell Size**

		Shipping Weight
McIntosh 6 Cell Galvanic Fluid Battery . . . . .	\$10.00	12 lbs.
Dimensions: 7 inches long, 8½ inches wide and 7½ inches high.		
McIntosh 12 Cell Galvanic Fluid Battery . . . . .	15.00	18 lbs.
Dimensions: 10½ inches long, 8½ inches wide and 7½ inches high.		
McIntosh 18 Cell Galvanic Fluid Battery . . . . .	20.00	24 lbs.
Dimensions: 14½ inches long, 8½ inches wide and 7½ inches high.		
McIntosh 24 Cell Galvanic Fluid Battery . . . . .	25.00	30 lbs.
Dimensions: 18½ inches long, 8½ inches wide and 7½ inches high.		

The illustration shows our Galvanic Fluid Battery, the 12 cell size. These batteries are all put up in finely finished, polished black walnut cases. The metal work in bright nickel finish makes a beautiful contrast with the polished, black hard rubber of the bases. An aluminum electrode box in the lid of the case provides suitable accommodation for the conducting cords, universal handles and spongio discs furnished with each outfit.

The 6 Cell Battery is suitable for light electrolytic work, such as the removal of superfluous hair, moles, warts, etc., and for other light applications, such as eye treatment.

The 12 Cell size is large enough for a considerable number of medical applications, and is especially suitable for cases where a physician wishes to leave a battery in the home of the patient.

The 18 Cell and 24 Cell Batteries are considered the proper sizes for physicians' use, and with one of these the practitioner is capable of treating almost any case in which the use of a portable battery is likely to be indicated.

## McINTOSH COMBINED GALVANIC AND FARADIC FLUID BATTERIES



**12 Cell Size**

		Shipping Weight
McIntosh 6 Cell Combined Galvanic and Faradic Fluid Battery . . . . .	\$15.00	20 lbs.
Dimensions: 10½ inches long, 8½ inches wide and 7½ inches high.		
McIntosh 12 Cell Combined Galvanic and Faradic Fluid Battery . . . . .	\$20.00	25 lbs.
Dimensions: 14½ inches long, 8½ inches wide and 7½ inches high.		
McIntosh 18 Cell Combined Galvanic and Faradic Fluid Battery . . . . .	\$25.00	30 lbs.
Dimensions: 18½ inches long, 8½ inches wide and 7½ inches high.		
McIntosh 24 Cell Combined Galvanic and Faradic Fluid Battery . . . . .	\$30.00	35 lbs.
Dimensions: 21 inches long, 8½ inches wide and 7½ inches high.		

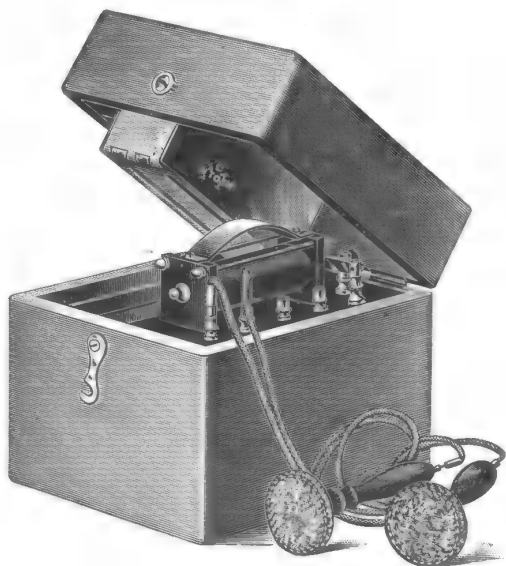
We illustrate above the 12 Cell type of our Combined Galvanic and Faradic Fluid Battery. These batteries are all put up in finely finished, polished black walnut cases. The metal work in bright nickel finish makes a beautiful contrast with the polished, black hard rubber of the bases. An aluminum electrode box, in the lid of the case, provides suitable accommodation for the conducting cords; universal handles and spongio discs furnished with each outfit.

The 6 Cell Battery is especially suitable for a dermatologist, as the galvanic portion is of proper strength for treatment of facial blemishes by electrolysis, while the faradic portion offers a current suitable for massage purposes.

The 12 Cell size is large enough for a considerable number of medical applications, and is especially suitable for cases where a physician wishes to leave a battery in the home of the patient.

The 18 Cell and 24 Cell Batteries are considered the proper sizes for physicians' use, and with one of these the practitioner is capable of treating almost any case in which the use of a portable battery is likely to be indicated.

## McINTOSH PHYSICIAN'S FARADIC BATTERY



Price..... \$10.00

This battery is put up in a neat, polished black walnut case, seven inches long, eight and one-fourth inches wide and seven and one-fourth inches high, and weighs less than nine pounds charged.

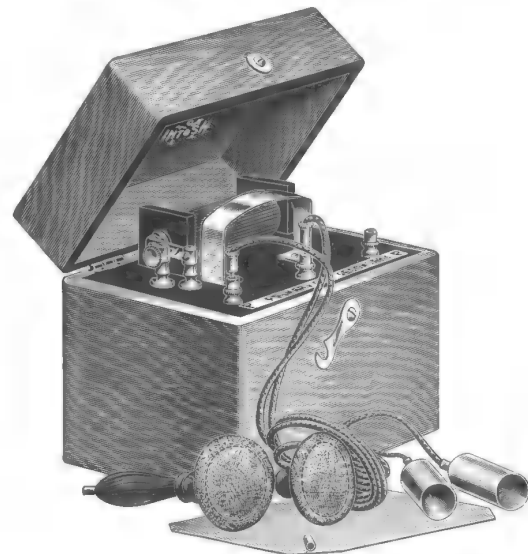
It has a glass cell and drip-cup and first-class induction coil with polished hard rubber ends and cover. All the metal work is nickel plated. The coil, binding posts and rheotome are placed on the upper surface of a polished hard rubber plate, the under surface of which is covered with soft rubber, the zinc and carbon being suspended underneath. When the elements are removed from the cell and placed in the drip-cup this plate is securely clamped over it, making it water-tight. The connections of the coil with the zinc and carbon are permanent.

To use this battery, raise the elements from the drip-cup and immerse in the fluid, placing the battery in operation; connect one end of the conducting cords with the binding posts and the others with the sponge electrodes and it is ready to use.

It is very convenient for a physicians' visiting battery or family use, as it is light and perfectly portable and gives sufficient strength to treat almost any case where the faradic or induced current is needed.

SHIPPING WEIGHT, 13 LBS.

## McINTOSH FAMILY FARADIC BATTERY



Price..... \$6.00

The constant demand for a low-priced Faradic Battery, suitable for home use, has led us to manufacture the above battery, which we believe will meet this want. It is made on the same principle as our larger Fluid Cell Faradic Batteries, but is designed especially for domestic use. It is put up in a neat black walnut case, six and one-half inches long, six inches high and five inches wide. All the metal work is finely nickel plated. A pair of conducting cords, universal handles, spongio discs, metal handles, a foot plate and a booklet of instructions are furnished with each battery.

SHIPPING WEIGHT, 10 LBS.

## McINTOSH INDUCTION COIL

This is a first-class Induction Coil same as is furnished with our "Domicile" and "Masseuse" Batteries, (pp. 98-99.) When connected with one liquid or dry cell it constitutes a perfect and complete battery.



Price, including conducting cords, and metal handles ..... \$3.50

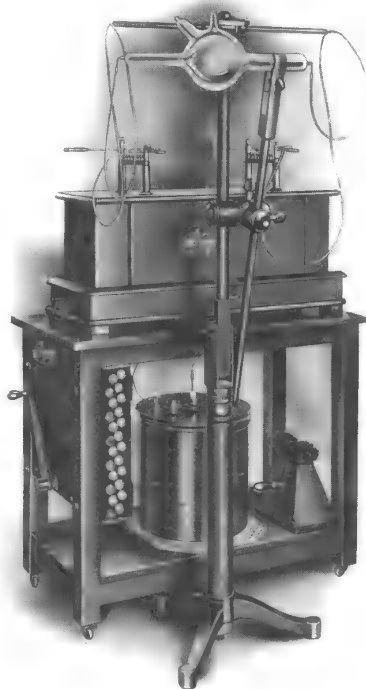
Postage  
20c

## McINTOSH STANDARD X-RAY COIL

The illustration shows our Standard X-Ray Coil with variable inductance multiple primary windings, for operation interchangeably on either direct or alternating current, together with our Electrolytic Interrupter, Tube Stand, 6 inch Heavy Anode Gundelach Tube, 5 x 7 inch Barium-Platino-Cyanide Fluoroscope and heavily insulated conducting cords. This Interrupter is by far the cleanest and simplest on the market and offers a maximum of operative efficiency with a minimum of care and attention. The apparatus is complete to the minutest detail and will fulfill the heaviest requirements.

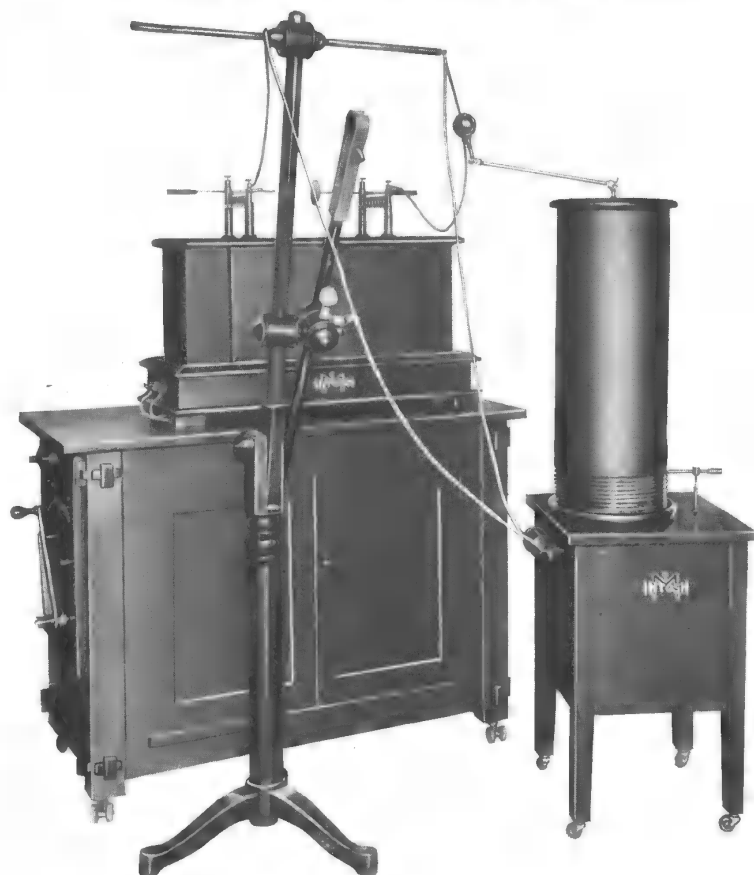
The insulation used is semi-hard, but not brittle, and additional security is provided by a heavy mica tube. This Coil is covered by a six-year guarantee.

The apparatus is finely finished in quarter sawed oak in the popular golden color, and, together with the heavily lacquered brass work, it presents a most attractive appearance.



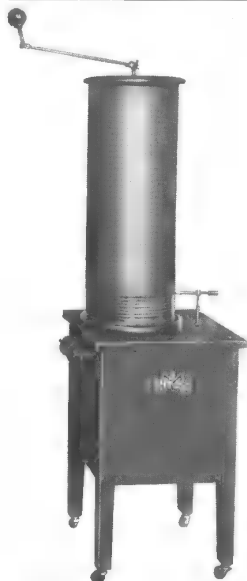
	Shipping Weight	
12 inch Coil, complete, as illustrated. ....	<b>\$215.00</b>	475 lbs.
Same as above, omitting Tube, Stand, Fluoroscope and cords. ....	<b>175.00</b>	343 lbs.
15 inch Coil, complete, as illustrated. ....	<b>280.00</b>	500 lbs.
Same as above, omitting Tube, Stand, Fluoroscope and cords. ....	<b>240.00</b>	368 lbs.
18 inch Coil, complete, as illustrated. ....	<b>390.00</b>	650 lbs.
Same as above, omitting Tube, Stand, Fluoroscope and cords. ....	<b>350.00</b>	545 lbs.
21 inch Coil, complete, as illustrated. ....	<b>470.00</b>	690 lbs.
Same as above, omitting Tube, Stand, Fluoroscope and cords. ....	<b>430.00</b>	605 lbs.
24 inch Coil, complete, as illustrated. ....	<b>560.00</b>	750 lbs.
Same as above, omitting Tube, Stand, Fluoroscope and cords. ....	<b>520.00</b>	655 lbs.

## McINTOSH MISSION STYLE X-RAY COIL



This apparatus is constructed on the same principle as our Standard X-Ray Coil, but is finished in the popular mission style in dark dull weathered oak. It makes a most attractive piece of apparatus and one which will suit the requirements of purchasers of most fastidious taste.

	Shipping Weight	
12 Inch Coil with Cabinet, Interrupter and Rheostat, Weathered Oak, Mission Style. ....	<b>\$200.00</b>	400 lbs.
Same as above, including Tube Stand and Resonator to match. ....	<b>267.00</b>	535 lbs.
15 inch Coil with Cabinet, Interrupter and Rheostat, Weathered Oak, Mission Style. ....	<b>270.00</b>	425 lbs.
Same as above, including Tube Stand and Resonator to match. ....	<b>337.00</b>	560 lbs.



## McINTOSH RESONATOR

Shipping Weight  
Price.....\$50.00 75 lbs.

This Resonator is furnished with special noiseless Spark Gap, and, at request, may be supplied with Leyden Jars or special high potential condensor; the latter offers greater efficiency and is not so apt to puncture as the Leyden Jars. The woodwork is of quarter sawed oak, highly polished.

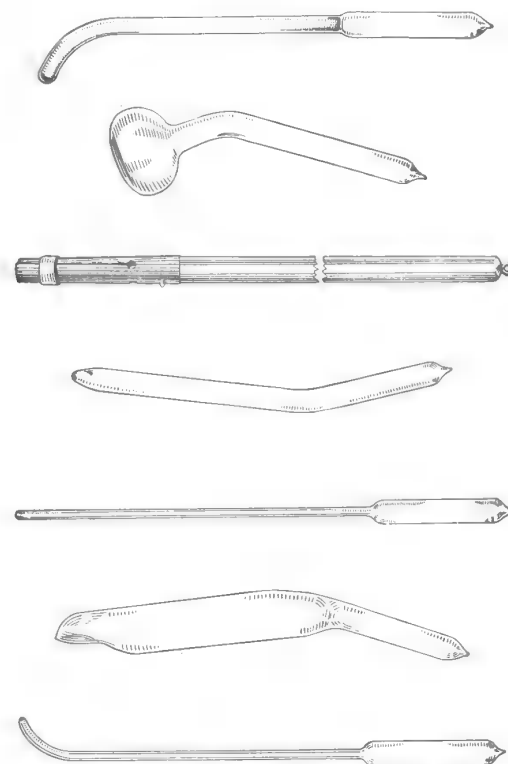
## McINTOSH ELECTROLYTIC INTERRUPTER

Shipping Weight  
Price, one point .....\$20.00 53 lbs.  
Price, two point ..... 30.00 60 lbs.  
Price, three point ..... 40.00 65 lbs.



This Interrupter has sufficient capacity to run for a great length of time without becoming exhausted. It is very clean and is inexpensive to maintain. The tube and stage are of porcelain and perfect adjustment is afforded by the regulating screw. With this Interrupter the alternating current becomes an ideal source of energy for Radiographic and Diagnostic work.

## DR. SNOW'S VACUUM ELECTRODES

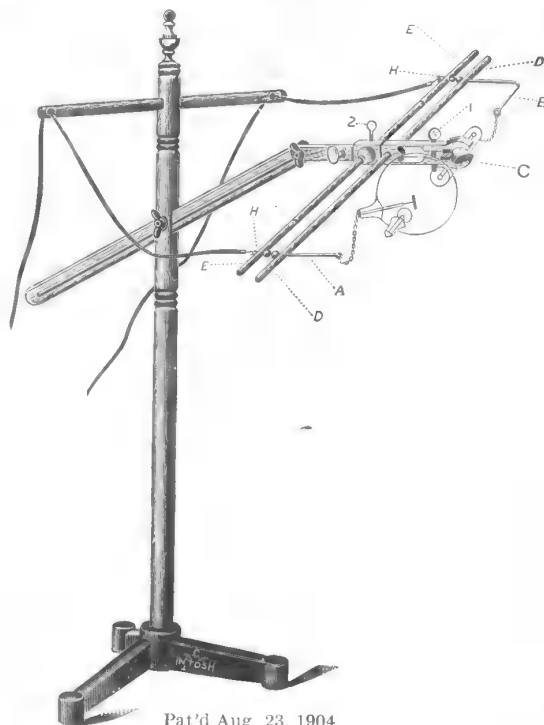


Price of complete set of six, including handle..... \$5.00  
Price of either electrode or handle, separately..... .75

To meet the demand for a set of Vacuum Electrodes to fit into a common handle, we show the above set; reading from top to bottom the instruments are, in their respective order: Urethral Electrode, General or Body Electrode, Insulated Handle, Rectal Electrode, Throat Electrode, Vaginal Electrode and Nasal Electrode.

SHIPPING WEIGHT, 3 LBS.

## HOGAN PATENT TUBE HOLDER



Pat'd Aug 23, 1904

Price..... \$12.00

The above cut shows the Hogan Patent Combined Pole Changer and Tube Holder attached to the Floor Stand listed on p. 119. This labor-saving device will prove a boon to the busy practitioner, as it will enable him to do his work in one quarter of the time formerly used. It possesses three distinct features, each of which is especially meritorious.

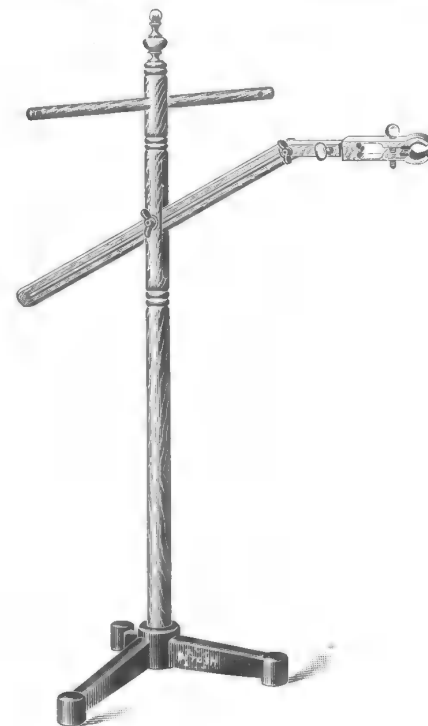
(1) The Pole Changer allows an instant reversal of the position of the tube, thus changing the polarity of the current entering same; or, in other words, it permits change of position of the tube with reference to the polarity of the supply current.

(2) A spark-gap may be introduced into the circuit on either the positive or negative or both poles, after the tube has been set in operation, by simply swinging back the horizontal rods, which are provided with a hinged joint.

(3) By swinging the tube and jaw around one-quarter of a complete revolution, so that the horizontal rods assume a position at right angles with each other, the circuit is broken so that the current is shut off completely from the tube. While in this position any adjustment can be made to the tube without danger of a shock.

SHIPPING WEIGHT, 35 LBS.

## McINTOSH X-RAY TUBE HOLDER



Price..... \$7.50

This is built of selected oak, in fine highly polished golden finish, and is mounted on a japanned cast-iron tripod; it can be adjusted to any position with perfect ease and holds the X-ray Tube without the slightest vibration. The improved jaw includes two separate clamps; one for grasping firmly the large necks of the popular German tubes, the other lined with a flat piece of cork for clamping the smaller tubes; thus making it a universal holder. The cross-bar serves to separate the X-ray cords, affording perfect insulation and preventing leakage of the current.

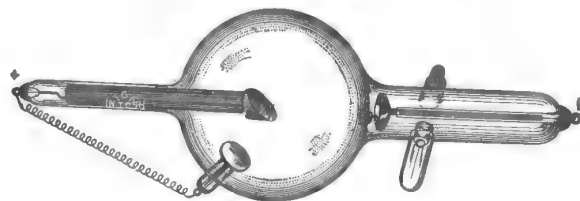
SHIPPING WEIGHT, 30 LBS.

## McINTOSH X-RAY CORDS

After extensive experiment we have succeeded in manufacturing a Conducting Cord which will carry the Static Current to an X-ray Tube without loss of current, and so perfectly insulated that it can be attached or detached by the bare fingers without the operator receiving any disagreeable sensation.

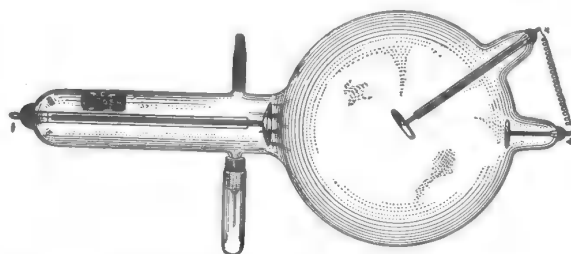
Price, per pair..... \$1.50 9c

## GUNDELACH X-RAY TUBES



GUNDELACH HEAVY ANODE TUBE SUITABLE FOR COIL

Style	Diameter of Bulb	Price	Shipping Weight
Type "A"	4½ inches	\$15.50	13 lbs.
Type "B"	4¾ inches	17.00	13 lbs.
Type "C"	5½ inches	19.00	13 lbs.
Type "D"	6 inches	21.25	18 lbs.
Type "E"	6¼ inches	23.75	22 lbs.
Type "F"	6½ inches	25.50	24 lbs.
Type "G"	7¼ inches	32.00	26 lbs.

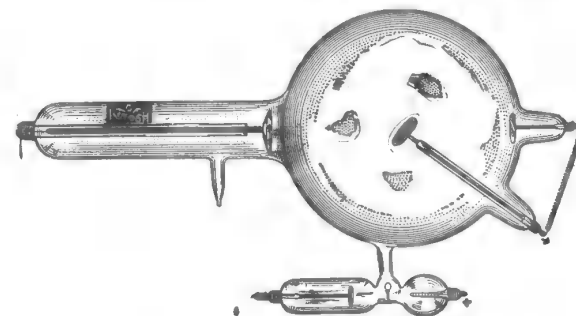


GUNDELACH LIGHT ANODE TUBE SUITABLE FOR STATIC MACHINE

Number	Diameter of Bulb	Price	Shipping Weight
1	4 inches	\$ 8.50	12 lbs.
2	4½ inches	9.75	12 lbs.
3	5 inches	10.50	13 lbs.
4	5½ inches	12.75	14 lbs.
5	6 inches	13.50	15 lbs.

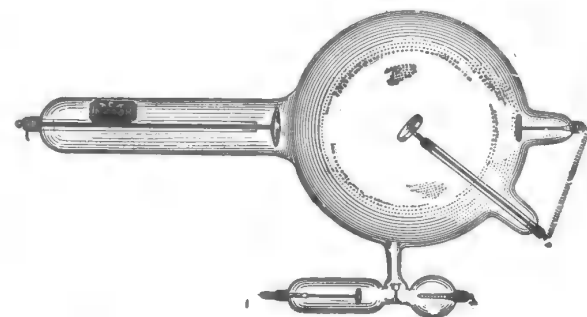
These tubes are all fitted with the heat reducing or Osmo regulator at the prices quoted. The regulator consists of a hollow palladium tube, closed on the outside, which is sealed into the cathode stem of the X-ray tube. It is protected by a glass covering. When it is desired to lower the vacuum of the X-Ray tube, the glass covering is removed and the flame from an alcohol lamp is applied to the palladium tube, until it becomes red hot. The flame is then removed and the palladium allowed to cool, when it will be found that the vacuum of the X-Ray tube is perceptibly lower. This has been accomplished by the heat having caused the pores of the palladium to expand; a small quantity of air being received into the tube and transmitted into the bulb of the X-ray tube. The operation can be conducted indefinitely.

## UNIVERSAL REGULATING X-RAY TUBES



LIGHT ANODE TUBE FOR STATIC WORK

No.	Diameter of Bulb	Price	Shipping Weight
No. 7A	Diameter of Bulb 6 inches	\$18.00	22 lbs.



HEAVY ANODE TUBE FOR COIL WORK

No.	Diameter of Bulb	Price	Shipping Weight
No. 7	Diameter of Bulb 6 inches	\$20.00	22 lbs.
No. 8	Diameter of Bulb 7 inches	24.00	25 lbs.
No. 9	Diameter of Bulb 8 inches	28.00	25 lbs.

The regulating device consists of a spiral of platinum and a carbon or mica disc. The spiral of platinum is used in raising the vacuum and the disc for lowering the same.

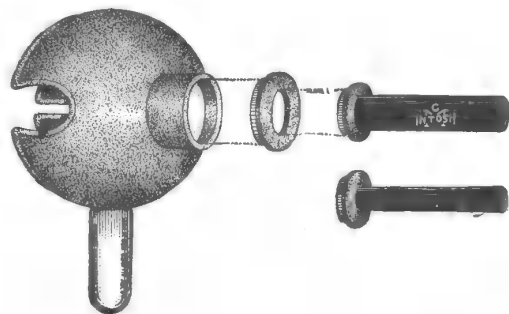
To lower the vacuum, attach the cathode or negative conducting cord of the main tube to the auxiliary cathode. If a coil is used, turn on the current carefully and, within a second, turn it off again. If a Static is used, separate the sliding rods and close them again in a moment or two. A gas will be liberated from the disc, lowering the vacuum immediately. If the vacuum is not as low as desired, repeat the operation, but be careful not to carry it too far.

To raise the vacuum, connect the anode or positive conducting cord of the main tube to the auxiliary anode and allow the current to pass through the tube from three to ten minutes, until the desired vacuum is obtained.

Immediately after raising or lowering the vacuum, make the regular connection to the terminals of the X-ray tube, so as to send the current properly through the tube.



## PROTECTIVE X-RAY TUBE SHIELD



Price..... \$10.00

This shield protects the operator as well as the patient against X-Ray burns. It fits around three-fourths part of the surface of the X-Ray Tube, and shuts out all rays except those which the opening permits to come through. A large and a small interchangeable hard-rubber extension tube is furnished with each shield, by means of which the operator is enabled to treat cavities, such as mouth, rectum, vagina, etc.

SHIPPING WEIGHT, 8 LBS.

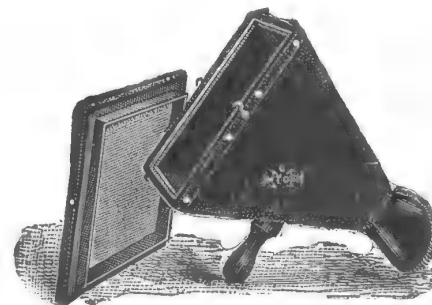
## McINTOSH X-RAY CORDS



Price..... \$1.50 Postage 9c

These conducting cords are of extra heavy insulation and can be attached or detached from an X-Ray tube, without shutting off the current or receiving any disagreeable sensation.

## BARIUM-PLATINO-CYANIDE FLUOROSCOPE

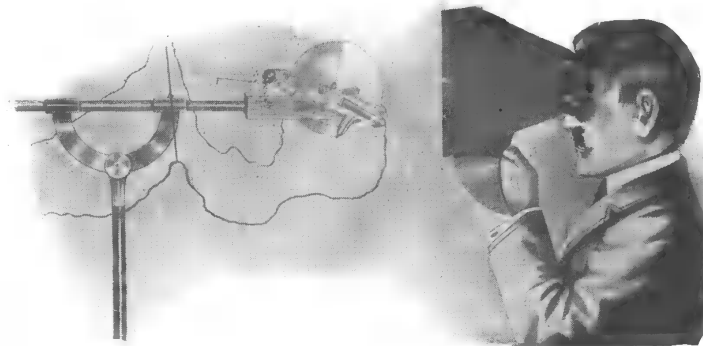


Our Fluoroscopes are fitted with the best Barium-Platino-Cyanide screens, size 5 x 7 inches. The frame and box are of the best quality and finish to be had.

Price..... \$10.00

SHIPPING WEIGHT, 6 LBS.

## PROTECTIVE FLUOROSCOPE SHIELD



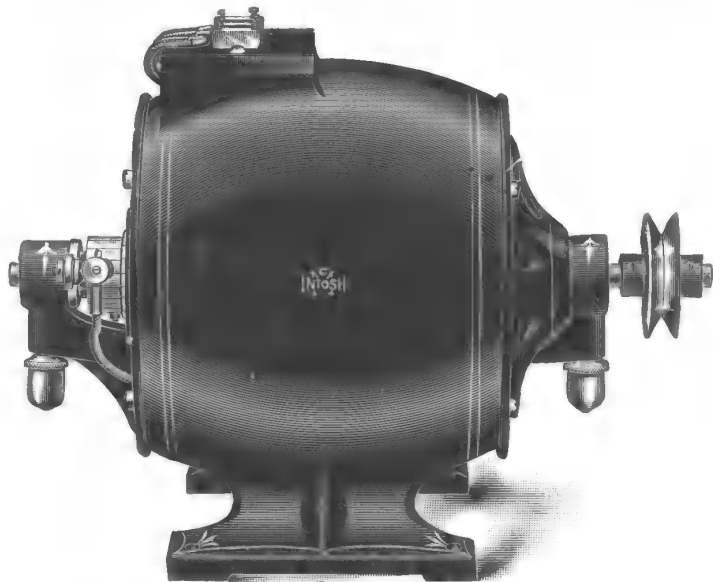
A physician who makes fluoroscopic examinations frequently exposes to the X-rays the hand which holds the fluoroscope, consequently incurring the danger of an X-Ray burn.

The above shield, which can be attached to any fluoroscope, prevents such a burn, as it protects the exposed hand.

It is made of the same material as the X-Ray Tube Shield, which is listed on page 122.

Price..... \$3.00 Postage 50c

## McINTOSH DIRECT CURRENT POWER MOTORS

 $\frac{1}{2}$  TO  $\frac{1}{3}$  H. P. MADE FOR 110, 220 AND 500 VOLT CURRENT

		Shipping Weight
Price of 110 volt $\frac{1}{2}$ H. P.	\$30.00	40 lbs.
Price with controlling rheostat	38.00	55 lbs.
Price of 220 volt $\frac{1}{4}$ H. P.	32.00	40 lbs.
Price with controlling rheostat	40.00	55 lbs.
Price of 110 volt $\frac{1}{3}$ H. P.	41.00	60 lbs.
Price with controlling rheostat	50.00	75 lbs.
Price of 220 volt $\frac{1}{2}$ H. P.	42.50	60 lbs.
Price with controlling rheostat	51.50	75 lbs.
Price of 110 volt $\frac{1}{3}$ H. P.	44.00	60 lbs.
Price with controlling rheostat	53.00	75 lbs.
Price of 220 volt $\frac{1}{3}$ H. P.	45.50	60 lbs.
Price with controlling rheostat	54.50	75 lbs.
Price of $\frac{1}{3}$ H. P. 500 volt direct current with controlling rheostat	60.00	110 lbs.

The motors here illustrated and described are thoroughly high-class in every respect. They are not to be compared with the cheap motors ordinarily furnished for commercial work, designed and constructed, as they are, especially for the use of the physicians, dentists and others requiring quiet running, well finished, practical and durable machines. No motors could be so well adapted to the work of operating static machines. For this purpose, they are used in connection with our speed-controlling rheostats, these latter being also particularly well adapted for static machine work.

## McINTOSH 12-POINT SPEED CONTROLLER



Accompanying cut shows the style rheostat used for controlling the speed of the  $\frac{1}{4}$  and  $\frac{1}{3}$  H. P. direct current motors.

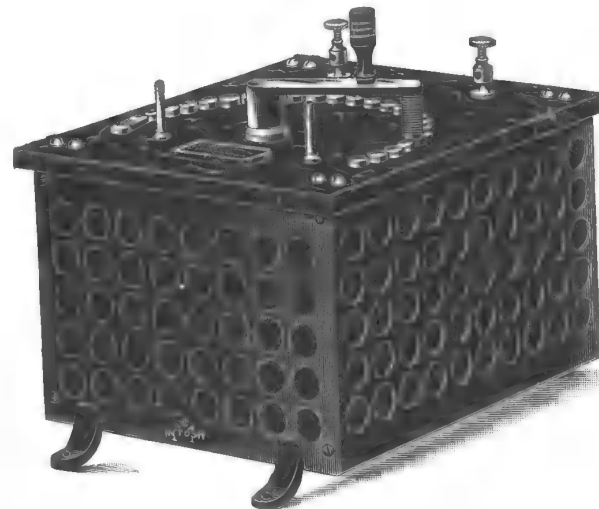
The resistance wire in these controllers is wound upon asbestos-covered metal cores and mounted so as to secure the greatest radiation. The containing box is of perforated metal; the top is marbleized slate, thus no combustible material enters into its construction.

The traveling contacts are self-aligning and so constructed that perfect contact is assured, each one being forced down upon the permanent contacts by spiral springs

All parts are nicely finished in marble, japan and nickel.

Price..... Shipping Weight  
\$9.00 25 lbs.

## McINTOSH 25-POINT RHEOSTAT

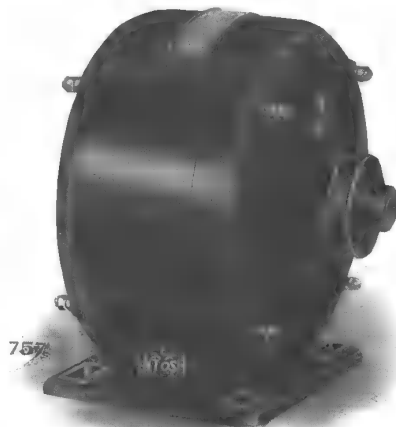


This rheostat, when used in connection with our direct current motors for static work, insures ABSOLUTELY PERFECT speed regulation.

A different resistance is required for static machines of different sizes and makes, and, when ordering, a description of the static machine that is to be operated should be sent us.

Price..... Shipping Weight  
\$15.00 30 lbs.

## McINTOSH ALTERNATING CURRENT MOTOR POWERS



### AUTOMATIC START INDUCTION MOTORS FOR SINGLE PHASE CURRENT

		Shipping Weight
1/2 H. P. 104-115 volts 60 cycles.....	\$33.00	45 lbs.
1/2 H. P. 104-115 volts 125-133 cycles.....	33.00	45 lbs.
1/2 H. P. 104-115 volts 60 cycles.....	37.00	45 lbs.
1/2 H. P. 104-115 volts 125-133 cycles.....	55.00	68 lbs.
1/2 H. P. 104-115 volts 60 cycles.....	60.00	68 lbs.
1/2 H. P. 104-115 volts 125-133 cycles.....	60.00	68 lbs.
1/2 H. P. 104-115 volts 60 cycles.....	92.50	140 lbs.

These motors are extremely compact, giving the maximum of power in the minimum of space; the construction is very simple and durable.

They start automatically when current is turned on, being provided with a starting device for this purpose.

No commutator, brushes nor insulated armature windings are employed, and the line wires may be connected direct to the binding posts without starting box or any special wiring or appliances.

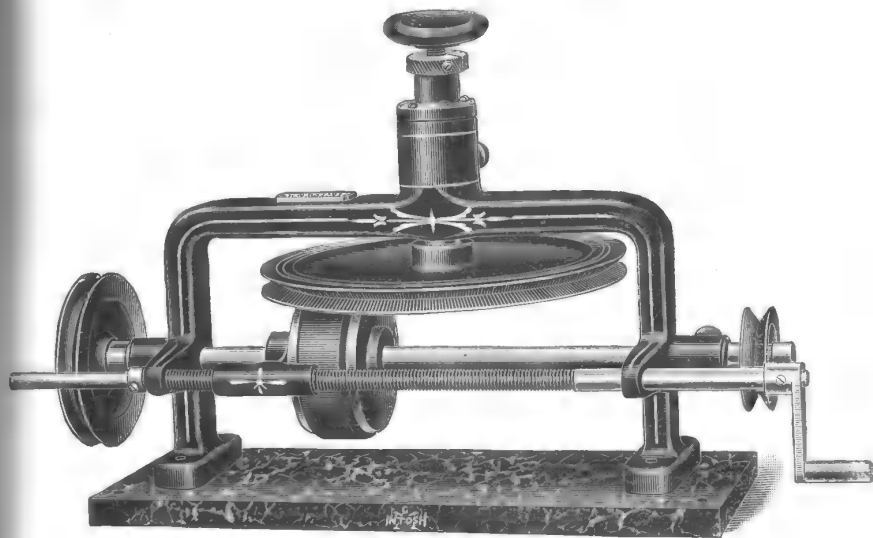
Large numbers of these machines have been placed in service during the last few years and are giving the highest degree of satisfaction.

**AUTOMATIC START, EFFICIENCY.** All of these motors have 1/2-inch tool steel shafts, accurately ground to size, and self-lubricating bronze bearings. As they operate on the simple induction principle without brushes or commutator to require adjustment, cleaning or renewal, they are thoroughly durable and need no attention beyond ordinary oiling. The automatic starting device with which they are equipped secures a prompt, definite start the instant the current is turned on and gives the motor a heavy starting torque. This device, in combination with the form of field winding followed, is responsible for the high efficiency of these motors. This automatic device has been proven entirely satisfactory by the operation of thousands of motors so equipped.

Like other induction motors of this class, **THESE TYPES OPERATE AT A CONSTANT SPEED**, which cannot be regulated or changed.

When speed control is essential, it can be obtained by the use of our Friction Speed Controller, illustrated on page 127.

## McINTOSH FRICTION SPEED CONTROLLER



### FOR USE IN CONNECTION WITH ALTERNATING CURRENT MOTORS OF 1/4 H. P. OR LESS

Price.....	Shipping Weight
\$25.00	50 lbs.

The fact that the speed of alternating current motors cannot be controlled makes it necessary to interpose some mechanical device between the motor and the machine operated where speed control is desired, as with static machines, etc.

In this controller the motor is belted to the large friction disc, which has a grooved edge to take a round belt; this large disc transmits the power to a smaller leather-faced friction wheel, set at a right angle to the larger one.

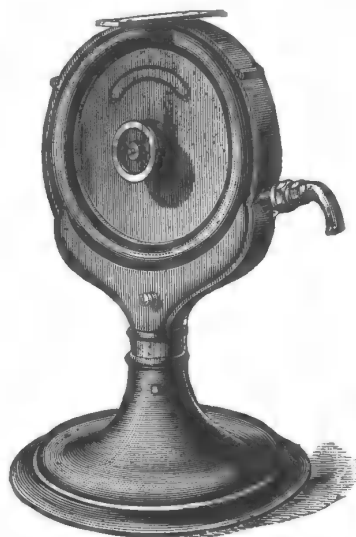
This smaller wheel is keyed to a shaft in such a way as to admit of its being moved laterally along the shaft, at the same time causing the shaft to revolve.

The pulley to which the machine to be operated is belted, is attached to the end of this shaft.

The small friction wheel is moved laterally across the face of the large one by means of a threaded rod, carrying a fork which engages the large wheel; this rod is provided with a crank for operating it.

An adjustment is provided to regulate the pressure of the large disc against the operating wheel.

The nature of the work performed by this apparatus requires that it should be perfect in mechanical construction if efficiency, durability and quietness in operation are to be obtained; we guarantee that it possesses all of these qualities.

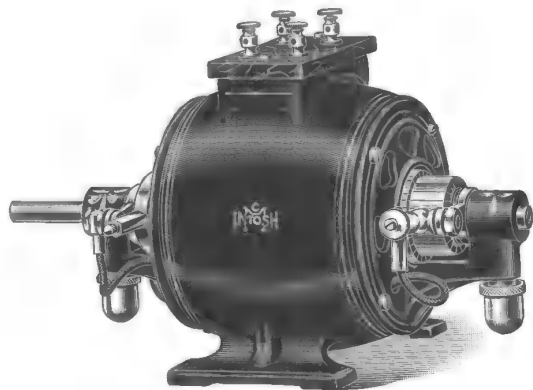


### McINTOSH WATER MOTOR

This Motor affords an ideal form of power for the physician who has no electric current available, but who has a good water pressure in his building. This Water Motor, when operated by a pressure of 60 to 75 pounds, will furnish ample power for the operation of the  $\frac{1}{6}$  H. P. Generator illustrated below. It also offers a very convenient method of operating a Static Machine or an Air Compressor.

Price..... \$35.00      Shipping Weight 60 lbs.

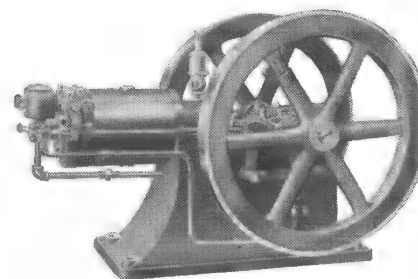
### McINTOSH $\frac{1}{6}$ -H. P. GENERATOR



Price..... \$30.00      Shipping Weight 40 lbs.

This machine, when operated at a speed of 2,000 R. P. M., will deliver a continuous or direct current of about one ampere at a pressure of 110 volts; when driven at a speed of 4,000 R. P. M. it will also furnish an alternating current of about three-fourths of an ampere at 70 volts. This machine is one which is especially suited to electro-therapeutic work, as the direct current furnished is suitable for galvanic use or for the operation of faradic coils; while the alternating current obtained is suited to the operation of a Caution Transformer or may be employed as a sinusoidal current. It affords an ideal means of supplying current for the operation of our Universal Wall Cabinet, No. 8, (p. 20), or for the Combination Wall Cabinet, No. 10 (p. 22). In connection with the Water Motor illustrated above, it constitutes a very satisfactory generating equipment.

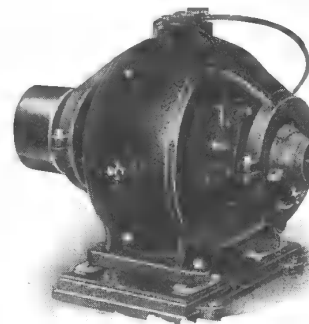
### JUNIOR 2 H. P. GASOLINE ENGINE



Price..... \$125.00      Shipping Weight 500 lbs.

The physician who has no electric light current in his office or who has no available water pressure can make excellent use of the above engine for obtaining power to operate a dynamo for the generation of electricity; or for any mechanical purposes for which 2 H. P. will be ample. The power obtained from the engine may be transmitted directly to an Air Compressor or any other machinery. This machine can be operated economically with gasoline, distillate alcohol, kerosene, natural gas or manufactured gas. It is of most substantial and durable construction, and we can recommend it as a high-grade appliance which may be easily operated and regulated by the physician.

### McINTOSH $\frac{1}{2}$ -K. W. GENERATOR



Price..... \$100.00      Shipping Weight 185 lbs.

The above machine is especially suited for operation in connection with the Gasoline Engine illustrated above. It generates five amperes of current at a pressure of 110 volts, when driven at a speed of 1550 R. P. M. This amount of current is sufficient for the operation of ten 16 candle power lamps for office lighting; or, when applied to electro-therapeutic work, it may be used for a variety of purposes. It offers sufficient volume for the operation of a 12-inch X-Ray Coil and for any light machinery, such as motors of  $\frac{1}{2}$  H. P. or less, which a physician might wish to use in his office. It affords a most satisfactory source of energy for a Wall Cabinet. A set of collecting rings are furnished so as to deliver an alternating current, which can be used for the operation of a Caution Transformer, or may be employed as a sinusoidal current. The currents obtained from this Generator may be very satisfactorily employed to energize our Universal Wall Cabinet, No. 8 (p. 20), or Combination Wall Cabinet, No. 10 (p. 22); while the direct current is suitable for any of our cabinets.

## McINTOSH AIR COMPRESSOR

The outfit consists of a single action piston air pump, with metallic ball valves, operated by a  $\frac{1}{8}$  H. P. motor.

These pumps will compress air up to 80 pounds and are all tested at that pressure, but we do not guarantee them to maintain a constant pressure of more than 40 pounds.

The time required to fill the receiver ordinarily used by physicians to a working pressure is from three to five minutes.

The advantages of this outfit over the water pressure pumps are obvious. It is much more convenient, cheaper to operate and maintain, more easily installed (all that is necessary to start it in operation is to plug in a lamp socket the same as an ordinary electric lamp), but its greatest superiority lies in the fact that it can be relied upon at all times to pump up any desired pressure in a very few minutes.

This pump is very quiet in operation, and is ordinarily placed directly in the operating room.

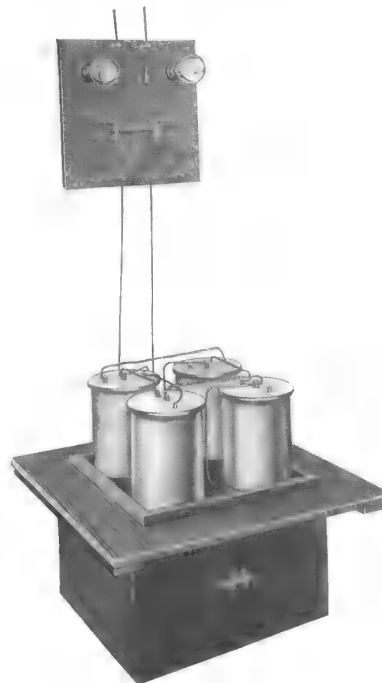
It costs no more to run than an ordinary fan motor.

All wearing parts are extremely simple and durable. The only part that requires occasional renewal is the leather packing of the piston; this can be replaced by any one in a few minutes and costs but a few cents.



Price, as shown in cut, wound for 110 or 220 volt direct current.....	<b>\$55.00</b>	Shipping Weight 85 lbs.
Price, wound for 104-115 volt 60 cycle alternating current.....	<b>55.00</b>	85 lbs.
Price, wound for 104-115 volt 125-140 cycle alternating current.....	<b>60.00</b>	85 lbs.
Price, wound for 500 volt direct current, consisting of pump, as shown, and $\frac{1}{8}$ H. P. motor and rheostat	<b>88.00</b>	100 lbs.
Price of complete pump without motor.....	<b>28.00</b>	50 lbs.

## McINTOSH HEAVY CURRENT RECTIFIER



	Shipping Weight	
No. 1, capacity 1 ampere.....	<b>\$15.00</b>	40 lbs.
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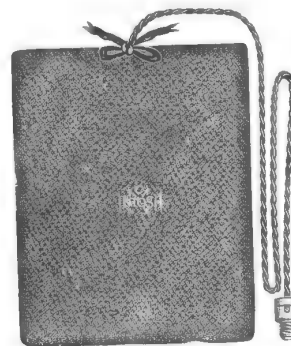
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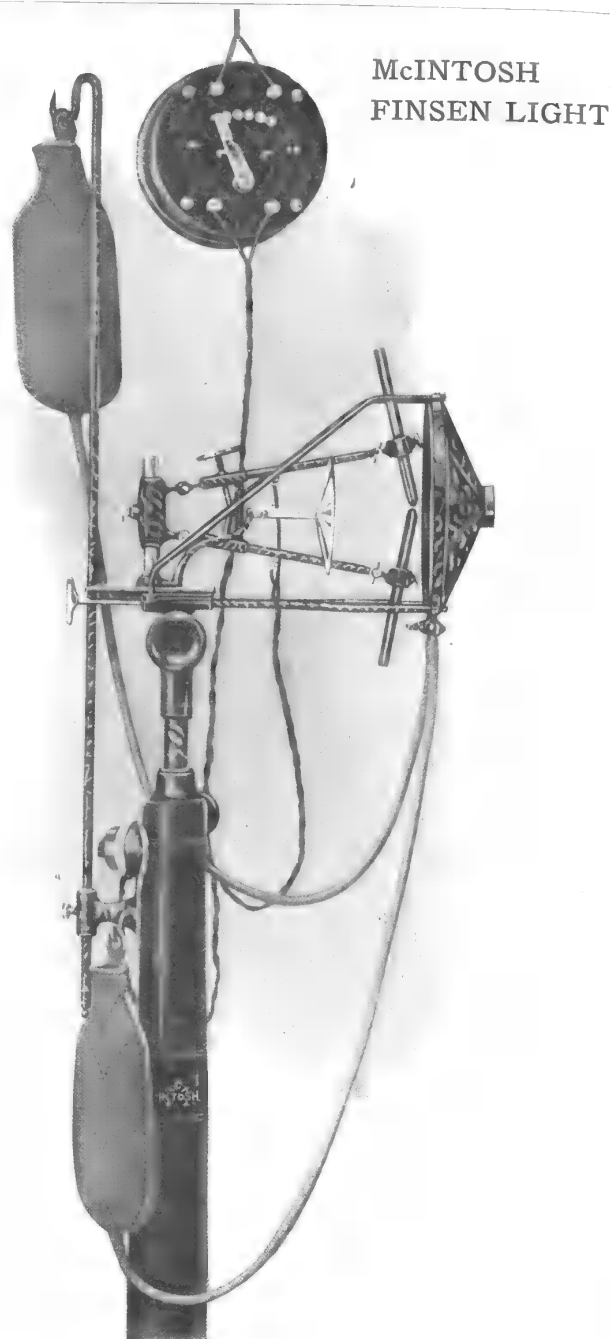
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